

NASA RECON Bulletin

1971-1974

NASA RECON Bulletin

1975-1977

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NASA RECON USER'S Bulletin

1978

1971



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON, D.C. 20546

REPLY TO
ATTN OF: KSB

July 2, 1971

TO: Distribution Listed

FROM: KSB/Chief, Systems Development

SUBJECT: NASA/RECON Bulletin

Enclosed is the first NASA/RECON Bulletin. We intend to publish these bulletins as needed in order to keep all terminal users informed of current status and significant changes.

Thus, as new capabilities are added to RECON and as new kinds of citations become available, we will routinely distribute these bulletins to all terminal sites.

Since these bulletins are intended to be a means for informing terminal users, we would welcome any comments you might have as to what kinds of information you feel would help you utilize RECON more easily.


Van A. Wente

Enclosure

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No. 71-1
July 2, 1971

NEW TERMINAL PRINTERS COMING

NASA Headquarters has taken action to purchase new teleprinters to replace the teletype printers now used at most RECON terminals. The new printer units should be delivered to each terminal location sometime within the next 45 days and installed following modifications of individual station controllers by Bunker-Ramo. Although the printers are being purchased from Data Access Systems, (who was low bidder), they are manufactured by Texas Instruments, Inc.

The new printers will be both faster and quieter than the present ones. While the current printers run at 10 characters per second, the new units will operate at 15 characters per second. The new printers will be far less noisy because they utilize a thermal technique, as opposed to the present impact method. This latter advantage is slightly offset, however, by the need to obtain special paper.

Current policy is that each installation will obtain its own supply of paper. Only one type of printer paper is currently known; it is that supplied by Texas Instrument specifically for its Model 720. However, it is possible that some more commonly available type will be found. If anyone is able to identify such an item, please let NASA Headquarters know, and the source will be published in another BULLETIN. To do so, write NASA Headquarters, Code KSB, Washington, D. C., 20546 (or call Bill Brown at 202-962-4970).

ORDERING INFORMATION FOR PRINTER PAPER

Paper for the new printers may be ordered from your local Texas Instruments representative. It comes in a 300-foot roll, priced at about \$5.00 per roll (about \$4.75 in quantities of 100 or more).

Order: Thermographic Paper for Texas Instrument Model 720

NEW RECON TERMINAL USER MANUAL

Final editing of a new RECON User Manual has been completed. Copies of this document will be supplied to each terminal site as soon as typing and reproduction have been completed.

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* * * NASA/RECON BULLETIN * * *

No. 71-2
July 13, 1971

Ordering Paper for New Printers

Problems have been encountered by many of you in ordering paper for the new printers. It seems that the best method after all will be to order the paper directly from Texas Instruments in Houston. Mr. Shotwell of TI has told us that delivery time should only be a week or so.

Please order Thermographic Paper for Model 720, Part No. 213714 from:

Texas Instruments, Inc.
Digital Systems Department
P. O. Box 1444
Houston, Texas

RECON Improvements Priorities

Attached is a copy of a self-explanatory request for your opinions on needed improvements to the system. If you will complete the forms and return them as soon as possible, your needs can be included in decisions on the scheduling of further improvements. We would prefer as many inputs as possible, as opposed to extremely precise ones at this time. Please send replies to Code KSB, NASA Headquarters, Washington, D. C. 20546.

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SCHEDULING RECON IMPROVEMENTS

Below is a list of improvements we are now considering for the RECON system. The sequence of their implementation depends both on technical feasibility and on users' needs.

You will help us establish a work plan, if you will indicate next to each item in the list your agency's approximate priority. Use the number "1" for the highest priority, and feel free to use the same number for several items. Items not required at all should be indicated by an "X" in place of a priority.

If you require any capability not now in the system or in the list, please write it in at the end, along with its relative priority.

Name _____

Agency _____

Priority

Capability or Improvement

Instruction Displays for Novice Users

More Explicit Error and Diagnostic Messages

Improved RECON User's Manual

Improved RECON Operator's Manual

Simplified BEGIN SEARCH and END SEARCH Procedures

Increased Number of File Collections Available

Range Search Capability

Text Search Capability

Root Search Capability (using a "Universal Character")

Increased Number of Terms in an EXPAND

One-Step, Direct EXPAND into Second Level of Subject File

EXPAND Capability for Contract Number and Report Number Files

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PriorityCapability or Improvement

EXPAND Capability for Corporate Source File
Using Corporate Name

Support of Other than BR-2200 Terminals

Support of Large Number of Terminals

More Convenient Specification of Terminal
Priorities

On-Line Cataloging and Indexing Data Entry

Display of more than one Citation per Page
using SPECIFY FORMAT

Ability to use more than one SPECIFY FORMAT
per Terminal per day for Over-night Printing

Reduced Core Usage Requirements

Increased Speed of Response

Complete Implementation of RECON STATUS
Command

RECON Operation under 360/OS with MVT

Improved System-Software Documentation

Other Improvements Desired:

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August 4, 1971

* * * NASA/RECON BULLETIN * * *

Partial Draft of New User's Manual Enclosed

Although the final copy for the new user's manual is not quite complete, the first section of it, dealing with the RECON commands is ready for release. Enclosed is one xeroxed copy of this section.

We hope to have the entire manual, including appendices containing explanations of files, error messages, and a complete sample search, distributed in the near future. At this time, several complete manuals will be sent to each RECON station.

Copies Available of "What NASA/RECON Can Do For You"

NASA Headquarters has a supply of the publication "What NASA/RECON Can Do For You" which we will be glad to send to any terminal site. This, you will recall is the twelve page booklet that describes the terminal and its operation. If you would like a supply of these booklets, communicate your need to Van Wente or Bill Brown at NASA Headquarters, Code KSB.

Specify Format Operational

Heretofore, the use of the SPECIFY FORMAT.(k) Command would sometimes bring the system down. This problem now appears to be corrected. Therefore, you may freely use this command, observing the following caveat's.

1. The last format specified by a given terminal during a day will be used for all format-4 overnight printouts for that terminal.
2. The effect of a semicolon (new line) now operates only on the immediately succeeding field specified. Thus, if you specify KL,12;14,15, and field 14 is missing, the fields 12 and 15 will not appear on separate lines. (The effect will be KL,12,15.)

Use of the EXPLAIN Command followed by the entry "FORMAT," will provide a RECON user with the basic instructions for this command. A more detailed explanation also appears on page 13 of the new Manual.

No. 71-3
August 4, 1971

RTOPs on RECON

Research and Technology Operating Plan summaries (RTOPs) are now available through RECON with accurately displayed names for the responsible technical monitors. The earlier problem of monitors' names running into titles in displays of RTOPs has been corrected. RTOPs are in file collections 2 and 4, and are in the accession series beginning with W71-70652 and ending with W71-71466.

The RTOP number is not available in the normal formats 1 and 2, but may be culled from a format 3 display. To do this, display the item or set using format 3 (e.g., dl/3/1), then, looking at the first line you will see the following general data format, where *p* is either blanks or special characters (usually @ or %), A is alphabetic, and N is numeric):

*pppp*ANNNNNN-NNN-NNNNNNNN-NN-NN*pppp*

Tel. No. of
Res. Person

RTOPs No.

As you will see, the RTOPs number consists of the last seven digits connected by hyphens.

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III COMMANDS

BEGIN SEARCH (\) Command

FUNCTION

To begin a new search and stop all reference to the previous search.

USE

When conducting a search, it is necessary to: (1) Identify yourself so that any output you receive will reach you without delay, (2) clear data entered by the previous search from the computer's memory, (3) select the file that you want to search. The BEGIN SEARCH (\) satisfies all three of these and must be done as the first step in every search.

Command	Operand	Example
BEGIN SEARCH	None	(\)

EXPLANATION

To do a BEGIN SEARCH depress the BEGIN SEARCH (\) key, then hit TRANSMIT (henceforth, it will be understood that TRANSMIT must be depressed in order to send any command to the computer). The following display will appear on the screen, one question at a time:

```
SEARCH TITLE
NAME OF PERSON CONDUCTING SEARCH
NAME OF PERSON RECEIVING RESULTS  IF DIFFERENT
MAIL ADDRESS
THE FOLLOWING FILES ARE AVAILABLE FOR YOU TO SEARCH:
1--STAR, IAA
2--
3--
```

Answer each question, then depress TRANSMIT and answer the next question. Continue this process until you have chosen a file. As a result, you will receive the following:

```
SEARCH TITLE (your title)
DATE/FILE    (today's date/file you have requested)
SEARCH BY    (your name)
REQUESTOR    (requestor)
ADDRESS      (your address)
```

```
SET NO.IN  (DESCRIPTION)
NO.  SET   (+=OR, *=AND, -=NOT)
```

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E-11

While the local printer records the above information, you can use the keyboard and screen to enter commands.

See Appendix 1 for a description of the files available.

EXPAND (a) Command

FUNCTION

To display an alphabetical list of twenty (20) index keys adjacent to an item of interest.

USE

When conducting a search, you will know one or more of several types of information (subject term, author, contract number, corporate source, report number) which can be used to access documents in RECON. Prior to creating a set of all the documents indexed to a certain subject term, author, etc., you may want to verify: (1) the existence of a subject term, author, etc., (2) the Type of Posting (TP) and/or Thesaurus Structure cross-reference terms (TS) for a subject term, (3) the correct spelling and punctuation for a subject term, author, etc. The EXPAND (a) command enables you to investigate the three points listed above.

Command	Operands	Examples
EXPAND	Subject Term	aLASERS
	ST/Subject Term	aST/LASERS
	AU/Author	aAU/WEBB, J.E.
	CN/Contract Number*	aCN/NASW-1454
	RN/Report Number*	aRN/NASA-CR-1318
	CS/Corporate Source*	aCS/GENERAL ELECTRIC
	Reference Number	

*Not yet implemented

EXPLANATION

A subject expansion of a "word" causes a display of alphabetically adjacent terms from the subject term index for that "word". The "word" can be any combination of alphabetic, numeric, special, and blank characters, with the restriction that the initial character be alphabetic. (Example follows)

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EXPAND ST/VEHICLES					REF	DESCRIPTOR	TP	ACC	TS
REF	DESCRIPTOR		TP	ACC	TS				
E01	ST/VEGETABLES-----N			25	6	E11	ST/VEITCH DIAGRAM-----O	1	0
E02	ST/VEGETATION-----B			311	3	E12	ST/VELA PROJECT-----O	113	0
E03	ST/VEGETATIVE-----O			36	0	E13	ST/VELA SATELLITES-----N	36	13
E04	ST/VEHICLE-----O			11709	0	E14	ST/VELOCITY-----B	16537	40
E05	ST/VEHICLE WHEELS-----N			52	11	E15	ST/VELOCITY DISTRIBUTIONB	3690	7
E06	ST/VEHICLES-----N			17	20	E16	ST/VELOCITY ERROR-----O	32	0
E07	ST/VEHICULAR TRACKS-----N			14	5	E17	ST/VELOCITY ERRORS-----N	68	5
E08	ST/VEIL-----O			5	0	E18	ST/VELOCITY FIELD-----O	13	0
E09	ST/VEIN-----O			245	0	E19	ST/VELOCITY FIELDS-----U	0	1

Terms displayed in a subject expansion are prefaced with ST/ to indicate Subject Term and are referenced by E01, E02, . . . , E41. The word you expand is always inserted in the E06 position. The expansion normally covers three "pages": to view the next page of an expansion depress PAGE (m) then TRANSMIT; to view a previous page of an expansion depress PAGE (m), and the hyphen (-), then TRANSMIT. To the right of each term appears: Type of Posting (TP), number of ACCessions indexed to that term (ACC), number of cross-reference terms in the Thesaurus Structure (TS). Type of Posting can be O, N, or B: O - for accessions indexed only to the Old Subject Authority List, for explanation see page ; N - for accessions indexed only to the New Thesaurus, for explanation see page ; B - for accessions indexed to both the Thesaurus and Subject Authority List. The Thesaurus Structure cross-reference terms can be of five types: US (Use); UF (Used For); BT (Broader Terms); NT (Narrower Terms); RT (Related Terms). The TS terms can be viewed for any term in an expansion. Suppose the term referenced by E09 in an expansion has 20 TS terms; to view all of these depress EXPAND (a), type: E9, then TRANSMIT. The TS terms will be displayed with TP and ACC, and will be referenced as R01, . . . , R21 with the expanded term (E09) in the R01 position. To view only one type of TS term depress EXPAND (a), type E9/, type the two character abbreviation for the type of term you desire; example - for Narrower Terms only enter: aE9/NT.* The TP and TS listings are designed to guide you to relevant search terms. Described below are four examples of such activity:

Case I. Suppose that in an expansion, the subject term CLOCKS is referenced by E11, with TP=N, ACC=35, and TS=8. The TP=N indicates that CLOCKS appears in the new Thesaurus (1968-present); therefore a further expansion (aE11) will yield a list of the cross reference terms (UF, BT, NT, RT):

R01	ST/CLOCKS
R02	UF/WATCHES
R03	NT/ATOMIC CLOCKS
R04	NT/CHRONOMETERS

*Not yet implemented

RO5	NT/CLOCK PARADOX
RO6	BT/MEASURING INSTRUMENTS
RO7	BT/TIME MEASURING INSTRUMENTS
RO8	RT/TIME MEASUREMENT
RO9	RT/TIMING DEVICES

Case II. Suppose that in an expansion, the subject term LASER is referenced by EO9, with TP=0, ACC=6811, TS=0. The TP=0 indicates that the term LASER appears only in the old Subject Authority Index (1962-1967). When the Thesaurus was created in 1968, most terms (such as LASER) appearing in singular form were changed to the plural form (LASERS) for indexing in the new Thesaurus. Thus, to locate documents on lasers from all years, you need two subject terms: LASER (TP=0) and LASERS (TP=N). Since TS=0, a further expansion of LASER (aE9) will yield nothing.

Case III. Suppose that in an expansion, the subject term WATER CONTENT is referenced by EO6, with TP=0, ACC=108, TS=1. The TP=0 indicates that the term WATER CONTENT appears only in the old Subject Authority Index (1962-1967). Further expansion of this term (aE6) yields:

RO1	ST/WATER CONTENT
RO2	US/MOISTURE CONTENT

Hence, to locate documents on WATER CONTENT or MOISTURE CONTENT from all years you need two subject terms: WATER CONTENT (TP=0) for the pre-1968 documents, and MOISTURE CONTENT (TP=N) for the post-1967 documents.

Case IV. Suppose that in an expansion, the subject term FLUORESCENCE is referenced by E17, with TP=B, ACC=1518, TS=13. The TP=B indicates that the term FLUORESCENCE appears both in the Subject Authority List and the Thesaurus. A further expansion of this subject term (aE17) will yield a list of the Thesaurus Structure cross-reference terms.

Author, Corporate Source, Contract Number, and Report Number expansions can also be used to place an index point (author, etc.) in alphabetical or sequential order in the appropriate index. Examples of commands for the different types of expansions:

Author	aAU/WEBB, J.E.	
Contract Number	aCN/NASW-1454	Not yet implemented
Corporate Source	aCO/NE368373	
Report Number	aRN/NASA-CR-1318	

SELECT (b) Command

FUNCTION

To create a set of documents indexed to a common item.

USE

After locating a valid, relevant term, you will want to create a set of all the accessions indexed to that term. Creating a set will provide you with a set number which serves as a reference number so that you can request that the computer:

- (1) DISPLAY citations (for those accessions) on the screen,
- (2) PRINT citations or accession numbers at the Facility in College Park, Maryland,
- (3) TYPE citations or accession numbers on the printer adjacent to your terminal,
- (4) COMBINE that set of accessions with other sets to yield more refined sets,
- (5) LIMIT that set of accessions to a certain year(s) and/or accession series.

The Select (b) Command causes sets to be created.

Command	Operands	Examples
Select	Subject Term ST/Subject Terms CN/Contract Number RN/Report Number CO/Corporate Source Reference Number Reference Number Range	bLASERS bST/LASERS bCN/NASW-1454 bRN/NASA-CR-1454 bCO/NE368373 bE6 bE6-E10 bE6,E8,E10-E15

EXPLANATION

The SELECT (b) command enables you to create sets of accessions indexed to a certain subject term(s), author, contract number, corporate source, report number.

You can also create sets by selecting terms with the E- and R- reference numbers from expansions. Examples: bE7; bE6-E8 or bE6,E7,E8; bE5-E7,E9; bE5,E14,E26-E28;bR5,R8.

Selection of index points (subject term, author, etc.) causes the local printer to record: the set number, the number of accessions indexed to the selected index point(s), a description of the set. For example, selecting ALPHA PARTICLES (bALPHA PARTICLES) causes the printer to record:

1

654

ALPHA PARTICLES

The set number is 1 (indicating that this is the first set you have created during your search), 654 is the number of documents indexed to ALPHA PARTICLES, and ALPHA PARTICLES is the term selected. As a further example, suppose you have expanded ELASTIC (aELASTIC) and by looking at the first two pages of this expansion you have located the following terms which are relevant to your search: E12 ST/ELASTIC BENDING, E15 ST/ELASTIC BUCKLING, E17 ST/ELASTIC COLLISION, E22 ST/ELASTIC DEFORMATION, E28 ST/ELASTIC PROPERTIES, E29 ST/ELASTIC PROPERTY. Rather than enter six separate SELECT commands, enter one command (bE12, E15, E17, E22, E28, E29) which will cause the documents indexed to each of these terms to be combined (by local OR) creating one set and will take less time than 6 commands. The results of this command will be recorded on the local printer as:

2

3890

E12,E15,E17,E22,E28,E29
E6: ELASTIC

The E6: ELASTIC tells you the expansion from which the reference numbers were chosen.

When you SELECT an index point (subject term, author, etc.) the number of accessions placed into the resulting set may be different from the number shown under ACC on an EXPAND list. If the set contains more accessions, it is simply because the files have been updated with new entries since the EXPAND list was created. If the set contains fewer accessions than shown on the EXPAND, it is because the file number you chose during the BEGIN SEARCH did not contain all possible files of data.

COMBINE (c) Command

FUNCTION

To combine two or more sets in an expression using the AND, OR, and NOT operators.

USE

The goal of a search is to locate accessions concerned with a certain topic. However, RECON is not designed to execute a command of the form: FIND ALL CITATIONS FOR ALL ACCESSIONS INDEXED TO LASERS AND SMITH, A.B.. You must first SELECT LASERS and SELECT AU/SMITH,A.B. producing sets 1 and 2. Then you COMBINE sets 1 AND 2 for the desired result.

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Command	Operands	Examples
COMBINE	AND	C1*2
	OR	C1*3
	NOT	C1-4
	Combination of above	C(1+3)*2-4
	Range of Sets COMBINED	C1-5/+ sets 1 through 5 combined with the OR

EXPLANATION

The COMBINE (c) command is used to create more refined sets by forming combinations of two or more existing sets using one or more of the boolean operators (AND, OR, NOT). In RECON the AND operator is specified by either of the symbols * or \$, the OR operator is specified by a "+", and the NOT operator is specified by a "-". Execution of a COMBINE (c) command automatically causes the creation of a new set for all those accessions satisfying the specified boolean expression. The set number, number of accessions, and boolean expression are then recorded by the local printer. Different types of sets (subject term, author, corporate source, contract number) can be combined. A maximum of 16 set numbers can be used in a single COMBINE (c) command. Any set number can be used in a COMBINE (c) command regardless of the manner in which the set was originally created (i.e., with SELECT (b), COMBINE (c), LIMIT (j), KEEP (n) commands); set numbers can be used any number of times in different COMBINE (c) commands.

To combine sets depress the COMBINE (b) key followed by the desired boolean expression. Examples: c4+5; c3-2; c8*7 or c8\$7; c(1+2+3)*(9-5); c1-5/+ or c1+2+3+4+5. Use parentheses to avoid ambiguity when more than one operator is used; 3+4*10 is different from (3+4)*10 since RECON will interpret 3+4*10 to be 3+(4*10). (Example: c1-5/+ means COMBINE (c) sets 1 through 5 with the OR operator.)

The following is an example of part of a search in which sets were created by selecting ALPHA PARTICLES, DECAY, and ELECTRON and then were combined to produce refined sets:

<u>Operation Desired</u>	<u>Command Entered</u>	<u>Results Produced</u>		
		<u>Set No.</u>	<u>No. In Set</u>	<u>Description</u> (+=OR, *=AND, -=NOT)
Select Alpha Particles	bALPHA PARTICLES	1	654	ALPHA PARTICLES
Select Decay	bDECAY	2	2939	DECAY
Select Electron	bELECTRON	3	23732	ELECTRON
Combine 1 or 3	c1+3	4	24386	1+3
Combine 1 and 2	c1*2	5	9	1*2
Combine 2 not 3	c2-3	6	2462	2-3
Combine 4 and 2	c4\$2	7	486	4*2

Set 4 contains all accessions indexed to:

- (i) ALPHA PARTICLES and not ELECTRON
- (ii) ELECTRON and not ALPHA PARTICLES
- (iii) both ELECTRON and ALPHA PARTICLES

Set 5 contains all accessions indexed to:

both ALPHA PARTICLES and DECAY

Set 6 contains all accessions indexed to:

DECAY and not ELECTRON

DISPLAY (d) Command

FUNCTION

To display on the screen one accession number or all accessions in a set.

USE

During your search, you may want to view citations or accession numbers for a set you have created to: (1) judge the relevance of the set to your topic, (2) search for more subject terms. The DISPLAY (d) command enables you to do this.

Command

Operands

Examples

DISPLAY

Accession Number

d71N12345

Set Number

d5

Set Number/Format

d5/2

Set Number/Format/Range

d5/2/6-10

EXPLANATION

The DISPLAY (d) command allows you to view, on the screen, citations or accession numbers for elements of sets. For example, if the accession number is known (say N66-23896), then to display the citation, type: d66N23896. To display elements of sets use the form: d(set no.)/(format)/(range).

Set number: 9 - This means that you want to display elements from set 9. "Set number" must be one number; to display elements from two different sets you must transmit two separate display commands.

Format: 1 - This causes accession number only to be displayed.
 2 - This causes full citation to be displayed.
 4 - This causes citations to be displayed in the format which you have previously designed in a SPECIFY FORMAT (k) command. See SPECIFY FORMAT command for description of its use (page).

Range: ALL - This means you want to display all the elements of a set.
 8 - This means you want to display the 8th citation in a set.
 3-10 - This means you want to display the 3rd through 10th items in a set.

Note that if you leave format and range blank, RECON assumes format = 2, range = ALL. Examples: (in parentheses are alternatives for the same display):

d9 (d9/2/ALL)	Display complete citation for all elements of set 9.
d15/1 (d15/1/ALL)	Display accession numbers only for all elements of set 15.
d3/2/5-15	Display complete citations for items 5 through 15 of set 3.
d5/2/7	Display the complete citation for item 7 of set 5.
d6/4 (d6/4/ALL)	Display all items of set 6 in the format designated by the most recently entered SPECIFY FORMAT (k) command.

The DISPLAY (d) command causes the first citation in the set to be displayed on the screen when you enter, for example, d9. To view the next citation in that set, depress DISPLAY (d), then TRANSMIT. To view: (1) the second page of a two page citation, (2) the next page of a list of accession number, depress PAGE (m), then TRANSMIT.

See Appendix 4 for the accession series order in which citations and accession numbers are displayed. See Appendix 5 for a list of the fields in a citation.

LIMIT (j) Command

FUNCTION

To place a limitation on a set that has been previously defined.

USE

Often, you will want to narrow your search to certain years, especially if you are searching only for recent material. RECON is equipped with a powerful tool, the LIMIT (j) command, which can be used to limit sets to certain years and/or accession series.

Command	Operands	Examples
: LIMIT	Set Number/Year	j5/71
	Set Number/Series	j5/71/N
	Set Number/Range	j5/71/N/20,000-35,000

EXPLANATION

The LIMIT (j) command has the form: j(set no.)/(year)/(series)/(range).

Set Number 8 - This means you want to limit the elements of set 8.
 Set number can be the number of any existing set;
 each LIMIT (j) command can contain only one set number.

Year: Examples: 65; 65-69; 70, 65-67; 69, 70
 You can use any year or range of years.

Series: Examples: A; N; B; R; X
One or more of the above series letters can be used.
See Appendix 2 for a list of "series" and "range".
See Appendix 3 for a description of the accession series.

Range: Example: 10000-79999
This may be any valid range for a given series.

Each of the following is a parameter: set no., year, series, range.
If you do not wish to limit a certain parameter, omit that parameter from the command. If the omitted parameter is at the end of the command, omit the slash preceding the field (e.g., j2/70/A; j2/69); otherwise, retain the slash (e.g., j2//A).

Examples:

j5/66-70/A/10000-79999	Limit set 5 to IAA accessions from the year 1966-1970
j3/70,68/A,N	Limit set 3 to A and N accessions from the years 1970 and 1968
j25/70	Limit set 25 to 1970 accessions
j7//A,N	Limit set 7 to A and N accession from all years
j12/62, 64-66	Limit set 12 to accessions from the years 1962, 1964, 1965, 1966

PRINT (e) and TYPE (f) Commands

FUNCTION

To produce hardcopy output of citations.

USE

After narrowing your search to sets containing accessions relevant to your topic, you can have citations or accession numbers for elements of these sets printed. The PRINT (e) command causes printing at the Facility in College Park, Maryland; the output is mailed to you the next day. The TYPE (f) command causes printing on the printer adjacent to your terminal. Since the local printer is relatively slow, the majority of your printing will be done at the Facility.

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Command	Operands	Examples
PRINT	Accession Number	e70N12345
	Set Number	e5
	Set Number/Format	e5/2
	Set Number/Format/Range	e5/2/6-10
TYPE	Accession Number	f70N12345
	Set Number	f5
	Set Number/Format	f5/2
	Set Number/Format/Range	f5/2/6-10

EXPLANATION

The general form of the PRINT (e) and TYPE (f) commands is the same, with the exception that e is used for PRINT and f for the TYPE:

PRINT	e(set number)/(format)/(range)
TYPE	f(set number)/(format)/(range)

The parameters (set number, format, range) are identical to those in the DISPLAY (d) command. Examples (in parentheses are acceptable alternatives):

e7 (e7/2/ALL)	Print complete citations for all elements of set 7
e8/1 (e8/1/ALL)	Print accession number only for all elements of set 8
f3 (f3/2/ALL)	Type complete citations for all elements of set 3.
f16/1 (f16/1/ALL)	Type accession number only for all elements of set 16.

Note: If you leave format and range blank, the computer assumes format = 2, range = ALL

An initial PRINT (e) command using format 2 or 4 (examples - e5; e1/4) causes the first 100 citations to be printed; to print the next 100, depress PRINT (e), then TRANSMIT. An initial PRINT (e) command using format 1 (example - e7/1) causes the first 500 accession numbers to be printed; to print the next 500, depress PRINT (e) then TRANSMIT. An initial TYPE (f) command using format 2 or 4 (examples - f5; f1/4) causes the first citation to be recorded on the local printer; to receive the next citation, depress TYPE (f), followed by the set and citation number desired (examples - f5/2/2; f1/4/3), then TRANSMIT. An initial TYPE (f) command using format 1 (example - f7/1) causes the first 84 accession numbers to be recorded on the local printer; to receive the next 84, depress TYPE (f), followed by the set nos. /1/85-168 then TRANSMIT.

If you know the accession number for a document, say N70-14689, you can PRINT or TYPE the citation for that document by entering e70N14689 or f70N14689. If you are viewing a citation which is displayed on the screen you can PRINT it or TYPE it by depressing PRINT (e) and TYPE (f), then TRANSMIT.

SPECIFY FORMAT (k) Command

FUNCTION

To define a new format unique to the user.

USE

The SPECIFY FORMAT (k) command enables you to design your own format for the fields in citations which are PRINTed, TYPEd, or DISPLAYed. For example, you may want a citation containing only: accession number, title, author, and notation of content.

Command	Operands	Examples
SPECIFY FORMAT	Field No., Separator, Field No.	k1;3 k1,3 k1,3,4; 5;6

EXPLANATION

A citation is composed of 39 numbered fields, each containing an item of information such as title. To delete and/or rearrange fields (which appear in citations when they are PRINTed, TYPEd, or DISPLAYed) use the SPECIFY FORMAT (k) command having the form: k(field)(, or ;) (field). The field following a comma (,) appears on the same line as the previous field; the field following a semi-colon (;) appears on the next line. Example: k2, 5;3 indicates field 2 is on the first line, field 5 is to the right of field 2 on the first line, field 3 is on the second line; no other field appears. The use of format 4 in the DISPLAY (d), TYPE (f), and PRINT (e) commands (example - e6/4) causes the use of your specified format.

When the SPECIFY FORMAT (k) command is used, it keeps a record of the format you designate. Then, the next time a DISPLAY (d), PRINT (e), or TYPE (f) command is entered with format = 4, say e6/4 (print all of set 6 in format 4), it looks for the SPECIFY FORMAT (k) command most recently entered from your terminal to decide the form the output will take. When you request sets to be PRINTed (example - e5/4), the PRINT (e) requests are written onto disks and then, at the end of the day, a special run causes all output requested by PRINT(e) commands to be printed. Therefore, if you have specified a set to be printed in format 4, the computer will search for the last SPECIFY FORMAT (k) command entered from your terminal that day. This last specification will be used for all format 4 output from your terminal that day. Hence, when using the SPECIFY FORMAT (k) command, check with your librarian to verify that you are the only person using the SPECIFY FORMAT on your terminal during that day.

KEEP (n) Command

FUNCTION

To place selected accession numbers into special set 99.

USE

Suppose that you are DISPLAYing, on the screen, citations from a set to decide if the set is relevant to your search. You may not want to PRINT all the citations in the set if the relevant ones are scattered throughout the set. The KEEP (n) command causes designated citations in existing sets to be stored in one set (set 99) so that they can be collectively accessed at some future time during your search.

Command	Operands	Example
KEEP	none	n
	Accession Number	n70N12345
	Set No/Item	n5/8
	Set No/Item Range	n5/8-10

EXPLANATION

If you know the accession number for a document, say N70-14689, then you can place the citation for that document in set 99 by entering n70N14689. Suppose you have a citation displayed on the screen; to place it in set 99, depress KEEP (n) then TRANSMIT. Suppose item 3 of set 7 is not displayed on the screen; to place it in set 99 enter: n7/3 (in general: n(set number)/(item)). Ranges of items from a set can also be "kept" in set 99; example: n7/1-25.

Any number of items from any set you have can be saved in set 99. To access the citations in set 99 follow the normal procedures as you would for any set. For example, to PRINT the contents of set 99 enter: e99.

PAGE (m) Command

FUNCTION

To page forward or backward.

USE

The PAGE (m) command is used to display succeeding (enter: m) or previous

(enter: m-) pages of:

- (1) an expansion
- (2) a display of accession numbers
- (3) a citation which occupies more than one page
- (4) a search status

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RECON STATUS (h)

This command should not be used, it is reserved for future use. To obtain RECON STATUS information use the EXPLAIN (o) command with the entry "RECONST." This will cause a display of the status of updating RECON's linear and inverted files.

SEARCH STATUS (i) Command

FUNCTION

To display on the screen a list of the defined sets in a search.

USE

As you proceed with your search, each command you enter (with the exception of the EXPAND (a) and DISPLAY (d) commands) is recorded on the local printer. SEARCH STATUS (i) enables you to view on the screen a consolidation of the search history recorded by the printer. This consolidation contains only sets created by SELECT (b), COMBINE (c), and LIMIT (j) commands; three columns appear: set number, number of accessions, description of the set.

Command	Operand	Example
SEARCH STATUS	None	i

EXPLANATION

To request a SEARCH STATUS depress SEARCH STATUS (i), then TRANSMIT. You may request a SEARCH STATUS at any time during your search. Example of a typical search status:

SET	NO.	DESCRIPTION
1	6227	E6,E11 PROBABILITY
2	2768	STATISTICS
3	7	PURI, M. L.
4	3	(1+2)*3
5	505	1*2
6	14	5/68-70

END SEARCH (g) Command

FUNCTION

To terminate a search process

USE

The END SEARCH (g): (1) insures printing of your output at the Facility and (2) causes the display of questions which, when answered by you, will provide an evaluation of RECON.

Command	Operand	Example
END SEARCH	None	g

EXPLANATION

After you have completed your search, including printing or typing of citations and accession numbers, it is necessary to do an END SEARCH (g). Depress END SEARCH (g), then TRANSMIT. The following questions will appear one at a time; answer the questions depressing TRANSMIT after each of your answers.

EXPLAIN (o) Command

FUNCTION

To obtain an explanation of a RECON command.

USE

This command is used to provide instruction in the use and format of the command language.

Command	Operand	Examples
EXPLAIN	COMMAND	oEXPAND
	CONCEPTS	oBOOLEAN
	ABBREVIATION	oNT
	ERROR CODE	oSE113

EXPLANATION

The EXPLAIN (o) key allows you to view a display of an explanatory text for each of the commands (example - EXPAND (a)), for concepts basic to a good understanding of RECON, for abbreviations used in RECON displays, and error message codes. The format of the command is EXPLAIN (o) followed by the operand and TRANSMIT. Note that since operands for this command must not exceed 8 characters in length, several of them are shortened versions of the usual commands: BEGIN (BEGIN SEARCH), END (END SEARCH), RECONST (RECON STATUS), FORMAT (SPECIFY FORMAT), SEARCH (SEARCH STATUS), THESAURI (THESAURUS), ACC (ACCESSION).

The operands to the EXPLAIN (o) command may be any of the following entries:

<u>Commands</u>	<u>Concepts</u>	<u>Abbreviations</u>	<u>Error Message Codes</u>	
BEGIN	SET	ACC	IF000	IF002
EXPAND	BOOLEAN	TP	IF00E	BL080
SELECT	AND	US	IF00F	BL084
COMBINE	OR	UF	IF00G	BL086
DISPLAY	NOT	BT	IF00I	BL088
PRINT	CITATION	NT	IF00N	BL096
TYPE	THESAURI	RT	IF00O	DX044
END		ST	IF00P	SE109
RECONST			IF00Q	CM109
SEARCH			IF00T	DX109
LIMIT			IF00U	SE113
FORMAT			IF00V	CM113
PAGE			IF00W	LM113
KEEP			IF00X	KP108
EXPLAIN			IF00Y	

IV - Physical Operating Characteristics

Bunker-Ramo Keyboard

The keyboard contains:

- (1) letters of the alphabet and space bar arranged as on a standard typewriter,
- (2) numbers 0, 1, , 9 on brown keys arranged as on a standard typewriter; numbers 0, 1, , 9 on white keys. The two sets of numerical keys are identical; they exist solely for your convenience,
- (3) special characters: ! " # % & ' () * : , . ? / ; - + \$
- is used as a hyphen and as the operator NOT
+ is used as the operator OR
* and \$ are used as the operator AND
- (4) physical operating keys: SHIFT LOCK, SHIFT, SCAN, STEP, INSERT, DELETE, TAB, LINE ERASE, CLEAR, PRT, HME, TRANSMIT.
- (5) command keys: BEGIN SEARCH (✓), EXPAND (a), SELECT (b), COMBINE (c), DISPLAY (d), PRINT (e), TYPE (f), END SEARCH (g), RECON STATUS (h), SEARCH STATUS (i), LIMIT (j), SPECIFY FORMAT (k), PAGE (m), KEEP (n), EXPLAIN (o). Note that there is a symbol or lower case letter associated with each of the command keys. When a command key is depressed, its associated symbol or letter appears on the screen. Most data you TRANSMIT to the computer will have one of these letters as its first character.

Entering Commands and TRANSMITting

Your communication with RECON is effected by means of commands you type on the screen. Ordinarily, you will type your command on the bottom line of the screen adjacent to the characters: ENTER. The cursor (┐ - green rectangle) marks the spot where the character you type will appear. Nothing which you type is TRANSMITTED to the computer until you depress the TRANSMIT key. When you depress TRANSMIT, the cursor disappears and a flashing "t" appears in the upper left corner of the screen. After the computer receives your command, the flashing "t" disappears and ENTER plus your command will be blocked out by: ***PROCESSING***. When the computer finishes processing, your answer is received on the screen (or the local printer), and ENTER appears on the bottom line.. You can enter another command as soon as ENTER appears at the bottom of the screen, even though the printer is still operating. If at any time the flashing "t" changes to a flashing "e" your message to RECON has been lost in transmission and you must repress the TRANSMIT key.

STEP ← (STEP →)

The STEP key moves the cursor one space at a time to the left (right)

SCAN ← (SCAN →)

The SCAN key moves the cursor to the left (right) at the rate of 25 characters per second.

26

2
The carriage return key moves the cursor to the beginning of the next line.

SHIFT

The SHIFT, when depressed, allows you to type all upper case special characters.

CLEAR

Depressing CLEAR causes all non-fixed characters (characters which have not been transmitted from the computer) to disappear from the screen. If you depress SHIFT and CLEAR keys simultaneously, the entire screen will be cleared and the cursor will appear in the upper left corner of the screen. (Note, you can enter a command from the upper left corner; ENTER will not be present in this case.)

SHIFT LOCK

The keyboard must always be kept in the SHIFT LOCK (SHIFT LOCK depressed) position.

INSERT

The INSERT key can be used to insert characters into a line you have typed (but not yet TRANSMITTED). Suppose you have ENTER: on the screen and you want to SELECT (b) a term and attempt to type bELECTRICAL IMPEDANCE.

You omit the P giving:
Put the cursor over the E:
Depress INSERT:
Type the P:
SCAN to the right:
TRANSMIT

ENTERbELECTRICAL IMEDANCE
ENTERbELECTRICAL IM:DANCE
ENTERbELECTRICAL IMEDANCE
ENTERbELECTRICAL IMP:DANCE
ENTERbELECTRICAL IMPEDANCE

DELETE

The DELETE key allows deletion of the superfluous characters suppose you have ENTER: on the screen and you want to SELECT (b) a term and attempt to type: bSPACECRAFT.

You type E twice giving:
Put the cursor over the E:
Depress DELETE:
SCAN to the right:
TRANSMIT

ENTERbSPACEECRAFT
ENTERbSPACE:CRAFT
ENTERbSPACE"RAFT
ENTERbSPACECRAFT

LINE ERASE

The LINE ERASE causes all non-fixed characters beneath and to the right of the cursor to be erased.

TAB

The TAB moves the cursor to the pre-assigned positions on the screen. It is used in answering questions for the BEGIN SEARCH and END SEARCH. (Not yet implemented)

HME

The HME key causes the cursor to return to the upper left corner of the screen if ENTER is not present, and to the right of ENTER if ENTER is present.

PRT

PRT causes reproduction of all data on the screen on the printer adjacent to the screen and keyboard. To use PRT: wait for ENTER to appear at the bottom of the screen; then depress PRT (it is not necessary to TRANSMIT). The screen and keyboard will be unusable until the printing is complete.

V - Error Conditions

There is no way you can harm the RECON system through the use of your terminal. Should you TRANSMIT an erroneous command to the computer: (1) there is nothing you can do to prevent computer processing of your entry, (2) you will receive an error message on your local printer, (3) after receipt of the error message you can re-enter your command correctly. If the flashing "t" changes to a flashing "e", depress the TRANSMIT key.

Some errors may be due to transmission of superfluous characters on the screen. To check this, after receiving an error message, depress SHIFT and CLEAR, then re-enter your command and TRANSMIT. If the error message persists, consult the following list of error messages for further instructions. If you receive an error message not listed below (example - BLØ86), depress SHIFT and CLEAR simultaneously, depress EXPLAIN (o), type the error code, then TRANSMIT (example - oBLØ86). This will cause the display of an explanatory text for the entered code.

Error Message

COMMAND ERROR - CHECK INPUT

Due to transmission error or an error in your command, the computer cannot recognize your entry as a valid command. Depress SHIFT and CLEAR simultaneously, re-enter your command, and TRANSMIT. If error persists call the RECON Coordinator at: (301) 982-6344 (on FTS Net) or (301) 779-2121 x606 (Off FTS Net)

INVALID ARGUMENT 1

There are two possibilities: (1) you have used an invalid set number in a COMBINE, DISPLAY, or LIMIT command, (2) you have attempted to further EXPAND an E-reference number which does not possess any TS terms.

INVALID ARGUMENT - PROCEED

See comment for: COMMAND ERROR - CHECK INPUT

INVALID COMMAND - PROCEED

See comment for: COMMAND ERROR - CHECK INPUT

INVALID SET NUMBER

You have used an invalid set number in a PRINT command.

(acc. no.) NOT IN FILE

example - 89N8Ø195 NOT IN FILE
The linear files have not yet been updated to contain the citation for this document.

TERM NOT IN DICTIONARY

You have attempted to SELECT a term which is not a valid term in the Thesaurus or Subject Authority List. To place the term into an EXPANDED alphabetical list, simply enter the EXPAND (a) command. The term you attempted to SELECT will be used automatically.

FILE NOT AUTHORIZED

You have selected an unauthorized file.
check with your librarian for list of
authorized files, then do another BEGIN
SEARCH.

FORMAT ERROR - CHECK INPUT

This could be one of two problems: (1) there
should be no third operand in your KEEP (n)
command (2) the "format" designation in your
DISPLAY (d) command is incorrect.

INVALID ACCESSION NUMBER

The accession number you have used is not
a valid NASA accession number in the collec-
tion you choose in your BEGIN SEARCH

VI - Sample Search

The following pages carry you through a sample search on WELDING DEFECTS IN ALUMINUM. Each command transmitted to the computer is listed under COMMAND (it is assumed that you must depress TRANSMIT the computer). The COMMENT column provides the reason for executing the command and the VIDEO-SCREEN and PRINTER columns provide the results of the command execution. The search is performed by first exploring the WELDING concept and choosing a number of terms. Then terms describing DEFECTS are chosen, and lastly terms are chosen describing the ALUMINUM concept. These three concepts are then joined with the operator "AND" to perform the desired search: WELDING "AND" DEFECTS "AND" ALUMINUM.

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* * * RECON BULLETIN * * *

Polling Anomalies

Several users have complained of unreasonably long polling times (time of the flashing "t"), and most having more than one terminal have complained of much worse service on one than on the other.

We have investigated the problems, with the help of GSFC and ASRDI people, and determined the nature of the anomaly. This was that, on any given telephone line, the first (lowest number) terminal trying to transmit to the computer was the only one that succeeded in doing so on a particular polling cycle. The lines themselves were each treated evenly.

Based on this information, an analysis of the RECON polling logic was made, which indicated that the problem was probably caused by timing delays in some of the hardware. A change was put into the RECON program at about 11:00 A.M., on Friday, August 13.

This change seems (as of this time) to have corrected the anomaly, but of course, it is too early to be very sure.

What we should expect to result from the change is a more even servicing of all terminals. Thus, the service for some terminals may degrade as that for others improves.

In order to get some idea as to whether you should expect an improvement or a degradation, consult the list of lines and terminals attached. If your terminal is below the top two or three active terminals on your line, you should get improved service. If your terminal is one of the top one or two on your line, your service will probably degrade. The expected degradation should be of lesser magnitude than the improvements.

If you have two terminals, the flashing "t" should disappear from one within three seconds of the other in nearly every case. The ***PROCESSING*** message should disappear from the second terminals from 5 to 15 seconds after it disappears from the first, if they both transmitted at the same time.

If you encounter any performance that is consistently at variance with these estimates, please give us a call so that we can look into it for you.

RECON TERMINAL LOCATIONS ON TELEPHONE LINES

<u>Line 1</u>	
<u>Terminal</u>	<u>Location</u>
32	Headquarters
33	Headquarters
34	Headquarters
35	Hqs/Library
36	GSFC/Library
37	House of Representatives

<u>Line 2</u>	
<u>Terminal</u>	<u>Location</u>
49	Langley/Library
50	Langley/Library
53	ASRDI
54	ASRDI
56	Lewis/Library
57	Lewis/Library

<u>Line 3</u>	
<u>Terminal</u>	<u>Location</u>
64	KSC/Library
65	STIF/Blacik

<u>Line 4</u>	
<u>Terminal</u>	<u>Location</u>
48	MSFC/RSIC
80	MSC/Library
81	MSC/ER

<u>Line 5</u>	
<u>Terminal</u>	<u>Location</u>
96	ARC/Library
97	JPL/Library

<u>Direct to Computer</u>	
<u>Terminal</u>	<u>Location</u>
16	STIF/Hanson
17	STIF/Eckert (L)
18	STIF/Eckert (R)
19	STIF/Waldo

* * * RECON BULLETIN * * *

No. 71-5
December 15, 1971

SERVICE CUTBACK

Limited computer resources and heavy seasonal workloads have, at this time, compelled a reduction in the hours of RECON operation.

Effective Tuesday, December 21, 1971, and until further notice, RECON will operate during the following hours only:

Eastern Time	9:00 AM - 6:00 PM
Central Time	8:00 AM - 5:00 PM
Pacific Time	6:00 AM - 3:00 PM*

Note the extension of available hours for some localities.

It is regrettable that this reduction must occur, but core space normally used by RECON is now essential to the continued production work which supports, among other things, the data base used by RECON. We will resume normal operation of RECON as soon as conditions permit.

INSTALLATION OF NEW PRINTERS

There has been some difficulty in arranging for hook-up of the new, quiet terminal printers delivered recently. It now appears that these difficulties will be overcome shortly, and we expect that the new printers will be operating sometime during the month of January.



1972

Internal

* * * RECON BULLETIN * * *

Baker
Post
Hend
Black
Tyler
Waldo
E. Kent

No. 72-1

January 21, 1972

AVAILABILITY OF CONTRACTS DATA FILE (CDF)

It is now possible to search the first increment of the Contracts Data File (CDF) using RECON. The CDF is a subject-indexed file containing information on the major research and development contracts and grants in effect at NASA Headquarters and NASA Research Centers. The file now contains about four hundred contracts and grants initiated during 1971. All contracts and grants initiated during 1971 are expected to be in the file by July 1, 1972.

CDF DESCRIPTION AND METHOD OF SEARCHING

The CDF will contain the following data elements for each contract or grant listed in the same sequence used for RECON displays:

1. Accession Number
2. Modification Number
3. Contract Number(s)
4. Cognizant NASA Installation
5. Sponsoring NASA Program Office
6. Contractor
7. Contract Title
8. Contract Security Classification
9. Inclusive Dates of Contract
10. NASA Technical Monitor and Code
11. Indication that reports are required
12. Indication of Report Production
13. Notes
14. Subject Indexing

The entry for each contract will be updated as necessary whenever contract modifications are made -- the latest modification number showing on RECON displays.

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific & Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344; off-FTS (301) 779-2121 x606 or 607). Other problems or questions may be directed to William Brown (telephone (202) 755-3465).

The RECON terminal will display and/or print out a contract citation containing the data elements mentioned previously. Statements of work are not entered on the RECON file.

The Contracts Data File is now available on RECON File Collection No. 4, which is the file group most often searched and the one a RECON User will have if the Begin Search Command is by-passed. The CDF has been assigned the K-10 accession number series beginning at 10,001 (72K10001).

This file is indexed, and may be searched by the following elements:

<u>Search Elements</u>	<u>RECON Command</u>	<u>Prefix</u>
NASA Technical Monitor	Expand or Select	AU/
Cognizant NASA Installation*	Select	CO/
Contractor	Select	CO/
Contract Number	Select	CN/
Subject (Vocabulary Term)	Select	VT/

Standard RECON formats for individuals' names (AU) corporate source codes (CO), and contract numbers (CN) are to be entered following the prefixes. Since all but one of these search elements uses the same prefix as a corresponding element in the bibliographic files (i.e., all except VT/), the searches based on them will retrieve citations for technical documents and other information. At present, if one desires to review only the contract data, one must use RECON's LIMIT Command to reduce a specific retrieval set of all-inclusive document references to comprise only references to contracts. Specifically, you must enter the following command:

jNN//K

where:

- j is the LIMIT Command
- NN is the number of the set being limited to Contracts and Grants data
- // are two slashes, and
- K is the letter "K" (the series to which the file is assigned.)

Thus, to limit set number six to only the contracts and grants items, one would enter:

j6//K

*This capability will become available about January 31, 1972

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Please note that the use of the subject search (VT/) entries results in the creation of a set that is already limited to Contracts and Grants data. Use of these terms requires an exact match, character-for-character, between the searcher's term and the index term, because this file is not yet available to RECON's EXPAND Command. (The EXPAND Command normally displays terms in an index file alphabetically near to any words or characters typed by the users.) VT terms comprise special words and phrases especially applicable to contracts. The NASA Thesaurus has not been used as the authority for this file.

Listings of VT terms will be distributed and updated as rapidly as possible and also added for use by means of RECON's EXPAND function.

In addition to subject terms, it is possible to perform a subject search based on SCAN topics. At least one SCAN topic is entered as a subject term into every contract or grant record. To perform a search using the SCAN topics, you must make the following type of entry:

bVT/SCAN NN-NN

where:

b is the SELECT command
 VT/ is the "VT/" prefix for
 subject searching
 SCAN is the word "SCAN"
 NN-NN is the SCAN-topic number

Thus, the entry

bVT/SCAN 30-02

would retrieve all items indexed to SCAN topic 30-02 (Stellar Astronomy and Cosmology).

The publication NASA/SCAN Selected Current Aerospace Notices (September 1971) contains the currently used listing of SCAN topics with their scope notes.

Questions about the contents of the CDF may be addressed to Paul Feinstein or Charles Hargrave on (202) 755-3464 or (202) 755-3462.

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Internal Dist.

No. 72-2
January 24, 1972

Baker
Past
Nand
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Tyler
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* * * RECON BULLETIN * * *

Obtaining Service for New Teleprinters

The new teleprinters are now being installed on RECON terminals. These units, which were manufactured by Texas Instruments, Corporation, were purchased from Data Access Systems, Inc. Data Access is providing maintenance service. If you experience any trouble with the teleprinters, the following procedures should be used to obtain repair service:

Call (201) 335-3322 by FTS Off-Net or commercial collect and tell them "this is a Service Call" after which, if you are calling collect, the charges will be accepted. Then, give the location of your terminal and the nature of the problem.

This central office will then dispatch a serviceman in your area, to repair your equipment.

Expand Files for Subject Terms and Authors

The EXPAND FILES for Subject Terms and Personal Authors must be used with caution, because these files are updated about twice a year. A capability to expand directly from the subject and personal author inverted files is in the planning stage with implementation to be scheduled. *can't we do this*

When the E06 reference indicates that a term or an author is not on the EXPAND FILE, a direct SELECT command for the term or the author should be made to insure full interrogation of the NASA STIMS data base. *why this*

RTOP Number Available In Format 2 Displays

In RECON Bulletin No. 71-3 of August 1971, we pointed out that the RTOP number was not included in Format 2 (the normal format) displays, and how to locate the RTOP number in a Format 3 display. This problem has now been corrected and the RTOP number appears in Format 2 displays on the same line as the Accession Number, but near the center of the line.

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* * * RECON BULLETIN * * *

Use of PRINT Command

The recent cutback in the hours during which RECON service is available has not produced as great a computer time saving as had been expected. This is largely due to a greatly increased use of the PRINT Command.

This could be compensated for either by further limiting the hours of RECON service, or by constraining RECON to print only a limited number of citations per search. Both of these approaches, however, would reduce the user's areas of freedom to operate. Therefore, we ask the cooperation of all of our users in voluntarily limiting the number of citations they print, so as to allow continued service at present levels.

Use of RECON

Several Center representatives have requested information on the use of RECON, particularly for their own terminals. The following table shows the average number of commands per five-day week for each terminal now in field use. A "command" is defined as being any instance of a RECON command's being transmitted to the central computer. The daily figures from which this table was compiled were obtained automatically from the RECON system during its processing. Other statistics on usage by specific command and by time of day is also being collected and analyzed.

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RECON operational problems may be directed to the RECON Coordinator:
at the NASA Scientific & Technical Information Facility in College
Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (301) 779-2121,
x 606 or 607). Other problems or questions may be directed to William G.
Brown (Telephone: (202) 755-3465).

<u>Ranking of Usage</u>	<u>10/19/71 --- 10/29/71</u>		<u>11/22/71 --- 1/20/72</u>	
	<u>Terminal</u>	<u>Commands Per Week</u>	<u>Terminal</u>	<u>Commands Per Week</u>
1	Lewis (39)	1658	Houston Lib (50)	1423
2	Houston Lib (50)	1288	Langley (31)	1092
3	Marshall (30)	1278	Ames (60)	1027
4	Langley (31)	1179	Marshall (30)	902
5	ASRDI (35)	914	Langley (32)	489
6	Ames (60)	728	Lewis (39)	442
7	Lewis (38)	480	GSFC (24)	438
8	KSC (40)	441	JPL (61)	411
9	JPL (61)	411	KSC (40)	283
10	ASRDI (36)	194	Lewis (38)	242
11	GSFC (24)	158	ASRDI (36)	166
12	Langley (32)	141	Hqs Lib (23)	104
13	Hqs Lib (23)	110	ASRDI (35)	80
14	Houston E.R. (51)	107	Houston E. R. (51)	50

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* * * RECON Bulletin * * *

Expand Command Enhancements

1. New Files Expandable

Four new inverted (index) files may now be expanded. These are the Report-Number, Contract-Number, Corporate-Source-Code, and K-series Vocabulary-Term files. Formerly only two files, the Author, and the Subject-Term files could be expanded.

To expand on any of these new files, the user need only enter the Expand Command, followed by the two-letter file code, a slash, and the character-string to be expanded upon. The two-letter file codes are the following:

New Files:

Corporate Source Code	CO
Contract Number	CN
Report Number	RN
Vocabulary Term	
(Used with Contract Data Only)	VT

Old Files:

Author	AU
Subject Term	ST (assumed)

Thus, to expand around Contract Number AF65, the entry required would be aCN/AF65 and TRANSMIT.

To expand around Report Number RR-61-20 the entry required would be: aRN/RR-61-20.

The EXPAND command in these cases operates in the same way as it does in the case of the older files, in that it uses whatever character string the operator supplies, whether it constitutes a valid entry or not.

In one respect, however, the displays for the new files differ from those for the older author and subject files. That is, in the new files only the number of accessions is given. No Thesaurus Structure or Type of Posting information is supplied.

2.

2. Control of EXPAND Range

For the four new expand files ONLY, there is now a capability to control the range of the expand operation. That is, whereas, the normal position of the character string expanded upon is E06 (i.e., the sixth position in the series), so that the character string entered is preceded by five and followed by 35 items, the user may now establish his own values.

The format of the entry for doing this is as follows:

aXX/STRING*i*j

Where: a is the EXPAND Command code
XX is the File Code (RN, CN, etc.)
/ is a slash
STRING is the character string to be expanded upon
* is an asterisk
i is the number of entries preceding the character string (up to 50)
j is the number of entries following the character string (up to 50)

For example, if one were to enter aRN/TEC*3*4
One would receive an expand output that would consist of only eight items. That is, it would contain only the three items preceding the item entered, the item entered, itself (in position E04), and four items following the item entered.

The output would appear as shown below:

EXPAND	RN/TEC	REF	DESCRIPTOR	TP	ACC	TS
--------	--------	-----	------------	----	-----	----

REF	DESCRIPTOR	TP	ACC	TS
E01	RN/TEAM-288-----		1	
E02	RN/TEAM-79-----		1	
E03	RN/TEAM-835-----		1	
E04	-RN/TEC-----		0	
E05	RN/TEC-496-----		1	
E06	RN/TEC-500-----		1	
E07	RN/TEC-504-----		1	
F08	RN/TEC-510-----		1	

ENTER:

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3.

Since the default (no entry) values are 5 and 35, respectively, and since these are always available, it is not necessary that you enter both values. For example, if you would like your input item to appear as the tenth item (instead of as the sixth), but do not care how many items follow it, you need enter only:

(intrepreted as CN/DA19*9
 CN/DA19*9*35)

If on the other hand, you want your input item and only the three items following it, but do not object to its appearing as the sixth item, you need enter only:

 aRN/HDL-TR**3
(interpreted as aRN/HDL-TR*5*3)

Please note that these controls are available only for expansion of the four files, CN, RN, VT, and CO.

In some instances, the input string may appear in position EOL, regardless of the users request format. This results only in those instances in which a very large number of items begin with the same first four characters (such as NASA in the Report-Number file). This condition will be corrected in the future.

3. Contract Data File Searchable Separately

The Contract Data File can now be searched separately by selecting File Collection No. 3 in the Begin Search process. Use of the Limit Command, as described in RECON Bulletin No. 72-1 is not then needed to limit a selected set to K-items only. The K-series remains also in File Collection No. 4.

Also note that, while it is possible to EXPAND the ST subject index and thesaurus file when searching in file collection 3, attempts to SELECT items from it will not be productive. This is because the Contracts Data File is subject indexed using the VT vocabulary terms only. These may, of course, be expanded.

4. Apparent Anomalies in Use of Select

It should be noted that the numbers of accessions shown as posted to an item by the EXPAND command is not affected by the file collection being searched. As as result, it is possible (and even likely in the case of File Collection 3) that the selection of an item shown in an EXPAND may produce no set. This is because the EXPAND output shows items for all file collections, none of which may be contained in any particular file collection.

RECON (Limit key)

NOV 1972

BETRE

Command:) ALL/67-72

APRIL 1 1972

EXAMPLE OF THE USE OF LIMIT-ALL

TOTAL ELAPSED TIME IS 002.13 MIN.

1 35 LUNAR MARE
LIMIT-ALL ACCEPTED 67-72
2L 5 LUNAR MARE
3L 5 LIMIT >01/67-72
4L 5 1+2
L 0 1-2
LIMIT-ALL RANGES 67-72
SETS 02-04
LIMIT-ALL ***OVERRIDE***
5 5 LIMIT >01/67-72
6 35 1+2
7 30 1-2

jALL/67-72

jALL/EXPLAIN

jALL/ALL

LIMIT-ALL ACCEPTED 70-72
♦LIMITED♦ LUNAR MARE
8L 100 LUNAR CRUST-
9L 100 8+1
L 0 1-8
L 0 1+8
LIMIT-ALL RANGES 70-72
SETS 08-09

jALL/70-72

jALL/EXPLAIN
jALL/EXPL

*** RECON BULLETIN ***

New Capability to Limit Search by Years

It is now possible to limit entire searches, or even parts of searches to only selected years and/or ranges of years. This is possible through the use of the LIMIT (j) ALL command, an extension of the normal LIMIT command.

Your use of the LIMIT (j) ALL command causes the computer to place the year-range limits on all sets you subsequently create either through the SELECT or the COMBINE commands. This limiting of all new sets will remain in effect until you either modify or cancel the original command.

You may perform three basic operations related to this command. These are the following:

1. Establish a LIMIT ALL range.
2. Modify or cancel a LIMIT ALL range.
3. Request information concerning LIMIT ALL ranges currently in effect.

The methods of performing these three operations are as follows:

1. Establishing a LIMIT ALL Range:

The following format is used to establish a LIMIT ALL range:

jALL/XX

where:

j is the LIMIT command
ALL is the word "ALL"
/ is a slash, and
XX is a year or year range.

The following are valid examples of such entries:

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<u>Entry</u>	<u>Meaning</u>
jALL/70	Limit all succeeding sets to items in the 1970 accession year.
jALL/68-71	Limit all succeeding sets to accessions from the years 1968 through 1971.
jALL/66, 68-70	Limit all succeeding sets to accessions from the years 1966 or 1968 through 1970.

The entry of one of these commands will cause the following responses on your printer:

"LIMIT-ALL ACCEPTED (Year Ranges)" *over range*

2. Modifying or Cancelling a LIMIT ALL Range

A currently valid LIMIT ALL range may be modified by simply specifying a different LIMIT ALL range. This is done in exactly the same way as that in which the original range was established.

It is important to note that the newly established range has no effect on sets created earlier.

The LIMIT ALL range currently in effect may be cancelled by entering the following command:

jALL/ALL

The cancelling of the ranges will cause the following message to be displayed on your printer:

"LIMIT-ALL ***OVERRIDE***"

As was the case with modifying the range, this will have no effect on sets created prior to the execution of this command, but will only allow new sets to be created without limits.

Note that limits already imposed on sets previously created will affect any sets created later by combining them.

3. Requesting Information on Ranges in Effect

All sets created during a period in which the LIMIT ALL command is active will have the letter ("L") appended to the set number. (Such as Set No. "8L", instead of Set No. "8".)

To determine what ranges are in effect, you must enter the following command:

JALL/EXPLAIN

The printer response to this command will be:

"LIMIT-ALL RANGES (year ranges)"
"SETS nn-nn"

or, in the event no limit is active, the printer response will be

"LIMIT ALL *** NO LONGER IN EFFECT ***."

The existence of a letter "L" appended to a set number will indicate to any user that a LIMIT ALL is in effect. However, as a courtesy to others, please cancel any active LIMIT ALL commands at the end of your search. At a later date, such cancellation will be made a part of the Begin or End Search commands.

*if null set date to limit-all the
may limited no add to set desired*

limit-all/limit ranges conflict

limit-all error - - - - -

*(BAD
ENTRY)*

EXPAND command

○ LIMITALL gets explanation

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific and Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (301) 779-2121, x 606 or 607). Other problems or questions may be directed to William G. Brown (Telephone: (202) 755-3465).

Mr. Tyler

Rusty
Hart
John
Hill

LIMIT-ALL ENHANCEMENT TO RECON

USER DESCRIPTION

Prepared by:

Milton H. Balser

Informatics TISCO, Inc.

June 9, 1972

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1.0 INTRODUCTION

The LIMIT-ALL command restricts entire searches, or parts of searches to user-selected years, series, or ranges of documents.

2.0 LIMIT-ALL SYNTAX

2.1 Establishing a LIMIT-ALL Range

The following format is used to establish a LIMIT-ALL Range:

JALL/XX/YY/ZZ

jall/67-72/ALL/10000-50000

where:

J is the LIMIT command code
ALL is the word "ALL"
/ is a slash
XX is any year or year range
YY is any series, or series range
ZZ is one or more document ranges

The diagnostic message appearing on the printer is:

"LIMIT-ALL ACCEPTED (years)/(series)/(ranges)"

2.2 Modifying a LIMIT-ALL Range

A currently valid LIMIT-ALL range may be modified by simply specifying a different LIMIT-ALL range.

2.3 Cancelling LIMIT-ALL Range

The LIMIT-ALL range currently in effect may be cancelled by entering the following command:

JALL/ALL

jall

The following diagnostic message will be displayed on the printer:

"LIMIT-ALL OVERRIDE (override ranges)"
"SETS mm-nn"

2.4 Requesting LIMIT-ALL Information

To determine what LIMIT-ALL range is in effect, the following command is entered:

JALL/EXPLAIN

The printer diagnostic message is:

"LIMIT-ALL RANGES (current ranges)"
"SETS mm-nn"

or, in the event no limit is active, the printer diagnostic is:

"LIMIT-ALL *** NO LONGER IN EFFECT***"

2.5 Unsolicited LIMIT-ALL Information

Whenever LIMIT-ALL is in effect, and a new set is created, the letter 'L' will be appended to the new set number.

This letter appears both on printer responses to a created set as well as an DISPLAY SET HISTORY commands output on the screen.

If the SELECT command creates a null set due to LIMIT-ALL, the diagnostic message "*LIMITED*" is added to the set descriptor.

If the LIMIT command is issued, and the ranges exceed valid LIMIT-ALL ranges the diagnostic message will be:

"LIMIT-ALL/LIMIT RANGES CONFLICT"

If the LIMIT-ALL commands is not issued correctly the following diagnostic appears:

"LIMIT-ALL ERROR- - -SYNTAX"

3.0 THE EXPLAIN COMMAND

The EXPLAIN Command will provide additional LIMIT-ALL information and examples. The user merely transmits;

oLIMITALL.

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4.0 EXAMPLES OF LIMIT-ALL COMMANDS

JALL/68,70-72

Limit all succeeding sets to accessions from the years 1968 or 1970 through 1972.

JALL/68/A,X

Limit all succeeding sets to items in the 1968 accession year and in series A, or X.

JALL/68/A/10000-20000

Limit all succeeding sets to items from 1968 in series A, and in the posting range of 10000 to 20000.

JALL/68-72//10000-20000

Limit all succeeding sets to items from 1968 to 1972 and in the range 10000 to 20000. (Note: It doesn't matter which series the postings are in).

JALL///10000-20000

Limit all succeeding sets to ranges 10000 to 20000. (Note: the year and the series of the postings are not limited).

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II AND SET RELEASING CAPABILITY

* * * RECON BULLETIN * * *

I. Alphabetic Range Search and Root Search CapabilityA. Functions

RECON now has the capability to perform alphabetic range searches and root searches. Both are invoked through the use of the SELECT command, and may be used for any index (inverted) file for which SELECT's are normally made.

The range-search feature, as the name implies, allows the user to SELECT all terms lying alphabetically between two terms.

The root-search feature allows the user to SELECT all terms which begin with a root segment. That is, he may specify the first few letters of a term, and thereby SELECT all terms that begin with those letters.

It should be noted that the use of the Range and Root options of the SELECT command will create sets, just as do the original SELECT command options, and that the sets created have the same properties as any other sets, and may be treated in exactly the same way as any other sets.

The results of Range and Root searches are logged on the console printer. However, in the Range and Root case, the printer's output will include the first and last terms actually selected. These may differ from those requested, either because those requested are not in the file or because the number of items found exceeds the arbitrary limit set for such an operation.

B. Limits

Since it is possible for a user to SELECT an entire inverted file using the Range feature, by specifying his range as "A" through "zzz," and since any very extensive SELECT operation will hold up other users, the following limits have been set on the Range and Root options.

1. Maximum number of items (postings, citations) retrieved 10,000
2. Maximum number of terms included within a range 100

Thus, if either of these limits is exceeded, the SELECT will end, and an appropriate message will be sent to the user, informing him of the extent of the range actually included in the set created.

C. Method of Use

There are seven forms in which the range and root options may be invoked. These are the following:

1. ~~b~~~~FC~~/LOTERM*HITERM (Normal Range Search)
2. ~~b~~~~FC~~/HITERM*LOTERM (Normal Range Search)
3. ~~b~~~~FC~~/ROOTWORD* (Root Search)
4. ~~b~~~~FC~~/TERM (One-Sided Range Search)
(Greater Than)
5. ~~b~~~~FC~~/TERM (One-Sided Range Search)
(Less Than)
6. ~~b~~~~FC~~+~~FC~~/TERM (One-Sided Range Search)
(Equal to or Greater Than)
7. ~~b~~~~FC~~--~~FC~~/TERM (One-Sided Range Search)
(Equal to or Less Than)

In the above formats, the items that are not obvious may be interpreted as follows:

b

SELECT Command Code

FC/

Two-character inverted-file code (ST, AU, CO, RN, CN, VT), followed by a slash. If this element is omitted, "ST/" is assumed.

*

Asterisk. Used to delimit two terms in a range and to indicate a root search as opposed to a single-term select.

+

Greater Than

-

Less Than

+ =

Greater Than or Equal to

--

Less Than or Equal to

Note that the "=" (equals sign) is not shown on some RECON key-boards. To type this character, use the shift key and the "logical not" (-) key.

D. Example of Use

Key-board Entry:

bRUDD*

Printer Response:

1 179 ST/RUDDER
 ST/RUDDERS
 ROOT/RUDD

Comment:

Using a Root search of the root "RUDD" we have established set number 1, containing 179 citations indexed under all subject terms between "RUDDER" and "RUDDERS." Note, that this might include such terms as "RUDDERLESS" "RUDDER CONTROL" and so forth.

Key-board Entry:

bRUBIDIUM*RUBIDIUM 86

Printer Response:

2 741 ST/RUBIDIUM
 ST/RUBIDIUM 86
 RANGE SEARCH

Comment:

Using a Range search, we have established set number 2, containing 741 citations indexed under all subject terms between "RUBIDIUM" and "RUBIDIUM 86."

Key-board Entry:

bMASS*

Printer Response:

3 9728 ST/MASS
 ST/MASS FLOW FACTORS
 ROOT/MASS
 POSTING LIMIT EXCEEDED

Comment:

Using a Root search, we have established set number 3, containing 9728 citations, indexed under all subject terms between "MASS" and "MASS FLOW FACTORS." Although there may be more citations that should be included, we have exceeded the maximum number of citations (postings) we are allowed to SELECT with one such command (i.e., 10,000).

If we wanted to continue with this range without duplication, we would have to enter:

bMASS FLOW FACTORSA*MASSZ

Key-board Entry:

bAU/JONES*

Printer Response

4 522 AU/JONES, A.
AU/JONES, C. T.
ROOT/JONES
TERM LIMIT EXCEEDED

Comment:

Using a Root search, we have established set number 4, containing 522 citations indexed to authors between "JONES, A." and "JONES, C. T." This time we have exceeded the maximum number of index terms (authors) that are allowed in one SELECT (i.e., 100). As before, we could continue by entering bAU/JONES, C. T.A * JONES, zzzz. Such a strategy may be repeated until we have selected all Joneses.

II. Set Release Capability

In order to conserve the limited space available for storage of sets during a search, a set release capability has been added. This will allow the elimination of sets that are not needed, and the use of the space thus vacated for additional sets.

Initially, only the most recent sets may be released. That is, if 15 sets are defined, the user may release set 15, or sets 14 and 15, or sets 10 through 15, and so on, but may not release set 8, or set 14, or set 12 alone.

The RECON STATUS (h) key is used to RELEASE sets. To RELEASE (h) a set or sets, the following formats may be used (assuming 15 sets to start with):

Command

Meaning

h15

(Release Set 15)

h13,14,15

(Release Sets 13, 14, and 15)

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Command

Meaning

h10-15

(Release Sets 10 through 15)

h8,9,10-15

(Release Sets 8 through 15)

The numbers of sets released will be re-used for new sets, if any are created.

Please note that, if a set is PRINT ed, it cannot be released, without causing the loss of the print-out, unless an END SEARCH is done, prior to its release.

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(5-10-72)
TEMP BULLETIN

72-6

RECON UPDATE.

FOR ROOT SEARCH

Select (Term Root) *

i.e. b MONITOR * =

all postings to "MONITOR" or
"MONITORS"

IN AS MUCH AS THERE IS NO "MONITORING"
OR OTHER INTERMEDIATE TERMS

FOR RANGE (TERM) SEARCH

Select (First Term) * (Last Term)

i.e. b A-1 AIRCRAFT * A-7 AIRCRAFT =

all postings to all terms included
between First & last as well as
those two!

(I understand there is a 10,000
hit limit on these options - They can
be used to eliminate expanding to
select a singular & plural term or
two adjacent synonymous terms - (NDT e.g.)

* * * RECON BULLETIN * * *

FULL CAPABILITIES FOR LIMIT ALL AND SET RELEASE

It is now possible to use the full power of the LIMIT ALL and SET RELEASE features of RECON.

Regarding the LIMIT ALL feature, you may now LIMIT all subsequent sets created in exactly the same way as you have been able to limit existing sets. That is, you may preset limits by accession year, series, and/or accession number range. (Refer to RECON BULLETIN No. 72-5 of April 19, 1972 for details.)

Regarding the SET RELEASE feature, you may now release any set or combination of sets, instead of only the latest sets. (Refer to RECON BULLETIN No. 72-6 of June 15, 1972 for details.)

NEW RECON OPERATING HOURS

Effective Monday July 31, 1972, the hours of RECON operation will be 8:00 a.m. to 7:30 p.m. Eastern time. Thanks to all for your patience during these months of curtailed operation.

*Tyler (3)**Waldo**Black**Griffith**copy to PTE*

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific and Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (301) 770-2121, ext. 606 or 607). Other problems or questions may be directed to William G. Brown (Telephone (202) 755-3465).

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* * * RECON BULLETIN * * *

Recently, several people have asked for guidelines as to who may be permitted to use RECON terminals. The policy in effect was covered by a letter of October 7, 1970, signed by Mr. John F. Stearns, then Director of the Scientific and Technical Information Office.

The following rules were set forth in the aforementioned letter:

1. NASA/RECON stations are for use only by NASA employees. Exceptions are Jet Propulsion Laboratory employees, employees of the Scientific and Technical Information Facility and library employees when providing reference service under a NASA library support contract.
2. Other government agency personnel should be allowed to use RECON stations only when special arrangements are made so as not to interfere with use of a terminal by NASA personnel or where a specific determination indicates that such use is in the best interests of NASA.
3. Non-government personnel (except as noted above) should not be allowed to use RECON terminals unless their informational needs stem directly from work for NASA, and then only when no other feasible alternative exists.

Your observing these rules will help prevent degradation of RECON performance.

*Tyler (3)
Waldo
Black
Guffin*

only to 1-1-72

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific and Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (301) 779-2121; ext. 606 or 607). Other problems or questions may be directed to William G. Brown (Telephone (202) 755-3465).

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Black
Griffith
Hornbarger
✓ Tyler (3 copies)
Waldo
Elkfritz

* * * RECON BULLETIN * * *

No. 72-11
September 26, 1972

RUSTY ON
HERB TB
HELEN HTW
HAL HTW
JOHN HTW

(Return to E. H. 7) I. New Begin-Search/End-Search Procedure

Effective Wednesday, October 4, 1972, new Begin Search and End Search procedures will be available. These will make it possible to complete these commands much faster than before.

The Begin-Search Bypass and End-Search Bypass procedures may still be employed exactly as before.

To use the new procedures, the terminal operator must first depress the Begin-Search key (or the End-Search key) and transmit. The screen will then be filled by a formatted display containing clearly demarcated spaces for user responses. The cursor will be automatically positioned at the start of the first space reserved for a response.

The operator then enters any information he wishes and uses the "Tab" key to go from one response area to the next. That is, the operator does not "Transmit" each response separately.

When all desired spaces have been filled in, the operator then Transmits the entire screen. The screen will then be cleared, and the "Enter:" message will appear, indicating readiness for command entry.

The above procedure will be used for both Begin and End-Search.

All entries need not be made for either Begin or End-Search. Entries are at the operator's discretion.

The teleprinter outputs for the new procedures differ slightly from earlier ones, and are shown in the attachment to this Bulletin.

II. Direct Expand Into Thesaurus Available

Effective Wednesday, October 4, 1972, it will be possible to perform an Expand command directly into the NASA Thesaurus structure (R-level) without going through the alphabetical list (E-level).

This new capability does not affect the ability to Expand from the alphabetic list (E-level) into the Thesaurus (R-level), which has been available in the past.

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The one difference to be noted is that the alphabetic Expand format (E-level) will not have a TS (Thesaurus Structure) column. Any item of type "B" or "N" will have related terms, however, while any item of type "O" will not.

Command Syntax

Any of the following six command forms can be used to interrogate the NASA Thesaurus directly.

1. aTS/TERM
2. aTS/TERM*BT
3. aTS/TERM*NT
4. aTS/TERM*RT
5. aTS/TERM*UF
6. aTS/TERM*US

In the above formats "a" is the EXPAND command code; TS indicates "Thesaurus Structure"; the slash is a delimiter; TERM indicates the particular Thesaurus term being interrogated; the asterisk is a delimiter; BT, NT, RT, UF, and US indicate broader terms, narrower terms, related terms, used for terms, and use terms respectively. The type of term selected by the user is provided in the EXPAND display. When type of term is not explicitly selected (command type 1) then broader terms, narrower terms, related terms, and used for terms are displayed. Use terms can only be requested via a type 6 command.

Compatibility With Existing Capabilities

The existing capability of interrogating Thesaurus structure by EXPANDING an E-numbered item obtained from a previous EXPAND will continue to be supported.

Automatic Interrogation of the USE File

Whenever an EXPAND command of type 1-5 (see Command Syntax) or an EXPAND of some E-numbered item (see Compatibility) is issued and the requested term is not contained in the NASA Thesaurus, the USE File will automatically be interrogated and USE information will be displayed if available. If a requested term cannot be located in either the Thesaurus or the USE files, then the diagnostic message TERM - INVALID ARGUMENT will be returned to the user.

III. Polling Sub-Task Installed

The RECON polling function has recently been converted to a sub-task. This means that the polling function (which is that part of RECON that causes the flashing "t" to disappear) now runs continuously, instead of only between commands.

As a result, you should have to wait an average of only about six or eight seconds for the "t" to disappear. Further, you should almost never have to wait for more than twenty seconds for this to happen.

Note, however, that there is one exception to this rule. That is, when your terminal has not been active for several minutes (more than about ten) it will not be polled as frequently as the active terminals. As a result, it may take considerably longer to transmit your first command than to transmit any of the succeeding ones.

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific and Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (301) 779-2121, ext. 606 or 607). Other problems or questions may be directed to William G. Brown (Telephone (202) 755-3465).

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Full Begin Search

TOTAL ELAPSED TIME IS 319.06 MIN.
SEARCH TITLE TEST SEARCH
DATE/FILE 7-27-72/2
SEARCH BY TESTER
REQUESTOR REQUESTER
ADDRESS ADDRESS ADDRESS ADDRESS

SET NO.	IN SET	DESCRIPTION OF SET
NO.	SET	(+=OR, +=AND, -=NOT)

Full End Search

Q1=2 Q2=2+ Q3=2+ Q4=2+ Q5=2+
TOTAL ELAPSED TIME IS 013.91 MIN.

Begin Search Bypass

TOTAL ELAPSED TIME IS 000.02 MIN.
SET NO. IN DESCRIPTION OF SET
NO. SET (+=OR, +=AND, -=NOT)

End Search Bypass

TOTAL ELAPSED TIME IS 000.73 MIN.

Figure 1. Old Terminal Printer Formats

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Full Begin Search

TOTAL ELAPSED TIME IS XXX.XX MIN.
***** BEGIN SEARCH *****
TITLE OR ID TEST SEARCH
DATE/FILE 7-27-72/2

SET NO.	IN SET	DESCRIPTION OF SET (+=OR, +=AND, -=NOT)
---------	--------	--

Full End Search

***** END SEARCH *****
SEARCH TITLE TEST TITLE
DATE/FILE 7-27-72/2
SEARCH BY SEARCHER'S NAME
REQUESTOR REQUESTOR'S NAME
ADDRESS ADDRESS ADDRESS ADDRESS
Q1=X Q2=X Q3=X Q4=X Q5=X
TOTAL ELAPSED TIME IS XXX.XX

Begin Search Bypass

TOTAL ELAPSED TIME IS XXX.XX MIN.
***** BEGIN SEARCH BYPASS *****
DATE/FILE 7-27-72/2

SET NO.	IN SET	DESCRIPTION OF SET (+=OR, +=AND, -=NOT)
---------	--------	--

End Search Bypass

***** END SEARCH BYPASS *****
SEARCH TITLE TEST TITLE
DATE/FILE 7-27-72/2
TOTAL ELAPSED TIME IS XXX.XX MIN.

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Figure 2. New Terminal Printer Formats

- 1 -

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LIBRARY NETWORK BOOK FILE

The beginnings of the Book Citations file of the NASA Library Network are now available on RECON. It is presently available in File Collection 4, and will soon be available in Collection 6 also.

Although this file at present consists of only about 1200 citations, its unusual features and potential for broad use should make it an item of major interest. Needless to say, constructive comment and criticism of citation contents and display formats will be most useful at this time.

The library network file, called NALNET, includes accession numbers in the V-10K series. The RECON EXPLAIN command provides specific file and format information in response to oNALNET and oFORMAT6 commands.

Index files are available, so that you may retrieve citations using the following search elements:

- LC Card Number
- Standard Book Number
- Holdings Code
- Title
- Personal Author
- Publisher
- Conference Name
- Conference Sponsor
- Series Title
- LC Subject Headings
- NASA Subject Headings
- MESH Subject Headings
- Personal Name Subject Headings
- Contract Number
- Report Number

Some of these search elements are contained in index files of their own; others share the same index files. Each index file has a two-letter mnemonic code for use in EXPANDING and SELECTing desired items.

Those elements having their own index files are the following:

<u>Search Element</u>	<u>Mnemonic</u>
Holdings Code	LH
Personal Author	LA
NASA Subject Headings	LS
Contract Number	LN
Report Number	LR

The search elements that are grouped together within index files are the following:

<u>Search Element</u>	<u>Mnemonic</u>
LC Card Number	LK
Standard Book Number	LK
Title	LT
Conference Name	LT
Series Title	LT
Publisher	LP
Conference Sponsor	LP
LC Subject Headings	LC
MESH Subject Headings	LC
Personal Name Subject Headings	LC

These search elements are used in the same way as the usual RECON index files. That is, the user enters the two-letter mnemonic, followed by a slash and the item of interest.

As an example, below are given the entries required to SELECT INFORMATION SYSTEMS from the Subject indexes.

- a. For STAR, IAA, and so forth:

bST/INFORMATION SYSTEMS

- b. For Library Network:

bLS/INFORMATION SYSTEMS

The parallel between these two entries is obvious, and one might reasonably ask why the two author indexes are separate at all. The reason is that, at this time, the new file is considered to be a test item, and is subject to change or withdrawal with little notice. This will cause less trouble for the other RECON files if the indexes are kept apart during the development period.

Probably, some of these separate indexes will be merged with their counterparts in the production system when trials have been completed.

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific and Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (301) 779-2121, ext. 606 or 607). Other problems or questions may be directed to William G. Brown (Telephone (202) 755-3465).

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OPTIONAL COMMAND SYNTAX

Heretofore, all RECON user commands have been entered through the two rows of command keys across the top of the RECON key-board. This placed a limitation on the ultimate number of command types available at any one time, and also prevented the future use of most other types of terminals in the RECON system.

RECON has been modified to eliminate these restrictions. Thus it is now possible either to use the command keys, or to type in the command in English (or in one or more abbreviated forms).

For instance, one may SELECT the author J. J. Jones in any of the following ways:

1. bAU/JONES, J. J. (using the Command key)
2. SELECT AU/JONES, J. J. (using key-board command entry)
3. SEL AU/JONES, J. J. (using an abbreviated form of the key-board entry)

A complete set of the current key-board command entries is given on the attached sheet, along with the lower-case symbols generated by the command keys, when available. Note that in addition to the special one- two- and three-character abbreviations, any upper-case English entry may be simply shortened to any length that specifies it uniquely. (That is "EXPAND" and "EXPLAIN" may be shortened only so far as "EXPA" and "EXPL," respectively, while "PRINT" and "PAGE" may be shortened to "PR" and "PA" respectively.)

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific and Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (301) 779-2121, ext. 606 or 607). Other problems or questions may be directed to William G. Brown (Telephone (202) 755-3465).

NAME	SYMBOL	FIRST	SECOND	THIRD	FULL MNEMONIC
Begin Search	i	B	ES	BGN	BEGIN-SEARCH
Expand	a	X	XP	XPN	EXPAND
Select	b	S	SEL	SL	SELECT
Combine	c	C	CC	COM	COMBINE
Display	d	D	DIS	DSP	DISPLAY
Print	e	PR	PRN	PRT	PRINT
Type	f	T	TY	TP	TYPE
End Search	g	E	ES	END	END-SEARCH
Release	h	R	FLS	REL	RELEASE
Search Status	i	SS	SCH	SST	SEARCH-STATUS
Display Set History	i	DSH			DISPLAY-SET-HISTORY
Limit	j	L	LIM	LMT	LIMIT
Limit-All	p	LA	LAL		LIMIT-ALL
Specify Format	k	SF	F	SP	SPECIFY-FORMAT
Format	k	F	FMT		FORMAT
Item	l	I	IT	ITM	ITEM
Page	m	P	PG		PAGE
Keep	n	K	KP		KEEP
Explain	o	XPL			EXPLAIN
Status	s	ST	STA		STATUS
Cancel	t	CA	CL	CAN	CANCEL
Range Search	b	RS	ENG		RANGE-SEARCH

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NEW CAPABILITY TO CHECK ON OR TO CANCEL A COMMAND

It is now possible to either check on the status of your last command entered and, in some cases, to cancel the command, if you desire.

The ability to determine status of the command will allow the user who is experiencing a long delay to find out if his command is truly active or if it has been lost.

The user will be informed that his command is either not in the system, in a named queue position awaiting processing (this is likely even though the message "Processing" has been received), or actually in the main processing section of the computer. If in processing, the CANCEL will not have any effect.

There is no command button available on the RECON key-board for either the STATUS or CANCEL commands. Therefore, to use these commands, you must type in the word "STATUS" or the word "CANCEL" (all upper case), and TRANSMIT.

Please note that it will be necessary to first clear the "PROCESSING..." message from the screen before entering either the STATUS or CANCEL command. This is accomplished by depressing the (blue) CLEAR key in the upper left-hand corner of the key-board.

Three responses to a "STATUS" command are possible. These are as follows:

1. STATUS -- IN QUEUE POSITION XX

This response means that the last command entered is waiting in line behind other user commands, and that it is the XXth command in line. Thus it will not begin processing until those in front of it have been processed.

While it is still in queue, the command may be CANCELED.

2. STATUS -- IN PROCESSING ELAPSED TIME = YYY.YY SECONDS

This means that the last command entered has gotten out of the waiting queue, and that it has been processing for YYY.YY seconds. Thus all subsequent delays are caused by the particular command itself or by some other non-RECON system delay.

It is not possible to CANCEL the command once it has reached this processing state.

3. STATUS -- COMMAND NOT FOUND

This means that you have no command active in the system. If you entered one but got no response this is due either to a RECON program error or to the response being lost in transmission.

If you attempt to CANCEL the last command entered, you will get one of two possible responses. These are the following:

1. COMMAND CANCELLED IN QUEUE

The meaning of this response is that the cancellation took place.

2. CANCEL IGNORED

This can mean any one of three things. Either the command has already been completed and the response is on its way, the command has been taken out of the queue and begun processing, or the command has been lost either through program error or in transmission.

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific and Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (301) 779-2121, ext. 606 or 607). Other problems or questions may be directed to William G. Brown (Telephone (202) 755-3465).

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USE OF SPECIFY FORMAT COMMAND

A previous limitation on the use of FORMAT-4 of the SPECIFY FORMAT Command at any single terminal no longer exists. It is not true that only one such command will be effective for each terminal each day (for over-night print-out).

The correct limitation on the use of the SPECIFY FORMAT Command is that only one such command should be used during each search. The last format specified for any given search will be the one used for all Format-4 over-night print-outs from that search. Therefore, to play safe with your own output, do an End Search or End Search Bypass after you have completed your search as well as a Begin Search or Begin Search Bypass before you start.

In your reference set of RECON Bulletins, No. 72- , please correct the previous information given on use of the Specify Format Command and make a cross reference to this Bulletin.

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific and Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (301) 779-2121, ext. 606 or 607). Other problems or questions may be directed to William G. Brown (Telephone (202) 755-3465).

No. 73-2
January 17, 1973

* * * RECON BULLETIN * * *

TELEPRINTER SERVICE CONTRACT AVAILABLE

NASA Headquarters has negotiated a contract with Data Access Systems, Inc., to furnish repair service for the Texas Instruments Silent 700 teleprinters attached to most RECON terminals. This service will be available until January 12, 1974.

To obtain service, authorized personnel only must call Data Access at (201) 335-3322 and request service, citing NASA Contract No. NASw-2479.

The following persons only are authorized to telephone requests for such service:

<u>Location</u>	<u>Number of Printers</u>	<u>Authorized Contact</u>
Reporters Building	1	R. L. Reecer
FOB 10-B	1	Mary Anderson
Goddard	1	Adelaide DeFrate
RSIC	1	Jack Harris
Langley	2	Philip Weatherwax
Lewis	3	Dorothy Morris
Kennedy	1	Librada Russell
Manned Spacecraft Center	2	Dean Bratten
Ames	1	Ralph Lewis
JPL	1	Rocco Crachi
Wallops	1	Sue Denton
EROS	1	Glenn Landis
Marshall	1	Ira Remer
NASA/STIF	5	Richard Enburg

If any of the above names are not acceptable, they may be changed through Headquarters by sending requests for changes to Bob Reecer (Code KSB).

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific and Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (301) 779-2121, ext. 606 or 607). Other problems or questions may be directed to William G. Brown (Telephone (202) 755-3465).

* * * RECON BULLETIN * * *

I. Long SELECT's Found to be Major Problem

We have recently been able to obtain considerably more detailed information concerning RECON operation. One of the things that has been discovered is that certain long SELECT commands are a definite bottleneck, and therefore degrade response time appreciably.

Since, as RECON now operates, each command is first received in a queue and then processed in turn, a single long-running command will cause a long delay not only for the user who enters it but also for all who are in line behind him. Consequently, all of us will do far better, if everyone will avoid the long SELECT's whenever possible.

Obviously, some SELECT commands will always be long, such as a SELECT of "CONFERENCES." However, such single-term long SELECT's are not terribly common, and further are not nearly so long running as are multiple-term SELECT's, especially those involving the Thesaurus Structure of R-level displays (e.g., SELECT R06-R12). This is because multiple-term SELECT's require both the SELECT and the COMBINE operations, and possibly many of each. Therefore, we suggest that all of our users impose upon themselves both of the following limitations for multiple-term SELECT's:

1. A maximum of about
10,000 postings per SELECT, and
2. A maximum of
10 terms per SELECT

If we all cooperate in this, we should see some improvement in our response times, from which we will all benefit. This is the only way of artificially "time sharing" RECON that will be available to us until the very large programming effort to do this has been completed. We expect the programming to be operational by about October 1973.

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific and Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (301) 779-2121, ext. 606 or 607). Other problems or questions may be directed to William G. Brown (Telephone (202) 755-3465).

II. Background Processing Not a Great Problem

Tests and measurements of the RECON system and of the full computer system have shown clearly that RECON performance is not greatly degraded by the background processing that is permitted under current operational guidelines.

The prime cause of degraded performance is the use of long-running commands, primarily multiple-term SELECT's, each of which causes a long delay for all users in the queue and for all users who enter the queue for some minutes afterward.

III. Possibility of SELECTing Major and Minor Terms

A few users have indicated an interest in being able to distinguish between subject terms which are used as major (published) terms and those which are used as minor (non-published) terms. Besides the additional discrimination capability implied, the operation of SELECTing only major or minor terms would speed RECON response by reducing SELECT time. We are currently trying to design such a capability, preferably with an option to SELECT both kinds of terms simultaneously.

If such a capability should be added, there will be an initial one-month test period, after which the method of operation may be changed in accordance with the results obtained, and users' opinions. All users will be notified in advance when this test is to begin.

* * * RECON BULLETIN * * *

REMINDER ON THUNDERSTORMS

It is now the time of the year when evening thunder-storms are common in the Washington, D.C. area. This may be expected to cause interruptions in RECON service, since the computer now installed is very sensitive to electrical storms.

If at all possible, RECON service is restored after the interruptions, except when the down time extends to approximately the time of normal service termination.

Thus, if you have a search in progress when such an interruption occurs, and you need to complete it, please call the RECON coordinator, and so inform him, so that you will not be disappointed.

REMINDER ON VOCABULARY

Occasionally a user indicates that, search results indicate a great disparity in holdings between the periods pre-and post-1968. This strongly suggests that the user failed to take account of the differences between the subject indexing of these two periods.

Please try to see that your users are at all times aware of the two different vocabularies used, so that their results may be consistent.

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific and Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (301) 779-2121, ext. 606 or 607). Other problems or questions may be directed to William G. Brown (Telephone (202) 755-3465).

* * * RECON BULLETIN * * *

PERFORMANCE IMPROVEMENT COMING SOON

After many months of design and coding effort, we have finally arrived at the point at which program changes to improve RECON performance are being integrated into the system.

Once this has been accomplished and all adjustments have been made, RECON should be able to process more commands per day than it can at present. However, during the period in which the changes are being made, we must expect more frequent problems (break-downs) and consequent reduction in total work done.

The period of integration is expected to last until the middle of December. We request your patience during this trying period in the expectation that it will have been worth it in the long run.

SUGGESTED NOTE FOR USERS

A suggestion is made that a small note on RECON terminals would be useful to inform users of the added delay encountered after a period of inactivity--currently any period of about 15 minutes in which no command has been entered by a particular terminal (Ref. RECON Bulletin No. 72-11). This seems like a very good idea, so we are passing it on to all concerned.

We would like to suggest that you place such a sign on any terminal used by non-library people saying something like the following:

When terminal has been inactive, the first TRANSMIT entry is likely to take longer to be picked up than is normal. (Barring line noise, "normal" poll time is 1-10 sec; the first entry may be 1-50 sec.)

TIME LIMIT ON RANGE SEARCH

As you may have noticed, in addition to the posting limit and the term limit on range searches, we have now added a time limit as well.

This limit is currently set at one minute of processing time. It may be changed in the future, depending on system operation and user needs.

2

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

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TELEPRINTER MAINTENANCE

The contract for maintenance of the Texas Instrument Silent 700 teleprinter at each RECON terminal has been renewed with Data Access Systems, Inc. of Mountain Lakes, New Jersey. The telephone number that you can use to report malfunctions remains (201) 335-3322. Other arrangements regarding the authorized person at each Center continue essentially as described in RECON Bulletin No. 73-2. NASA Contract No. NASW-2479-Mod.1, which runs through January 11, 1975, should be cited. Under the terms of this contract, Data Access response to maintenance calls should not exceed 48 hours. Please let us know if you have any difficulty with this procedure or if the response time is unsatisfactory.

SET RELEASE MISUNDERSTANDING

It has come to our attention that some users are not taking full advantage of the SET RELEASE feature, due to a misunderstanding of its effect. This is because they are concerned with the effect of releasing a set that has been combined to create a subsequent set.

Once a RECON set has been created through either a SELECT, a COMBINE, or a LIMIT command, that set is completely independent. Thus, the release of any set used to create another (by COMBINE or LIMIT) will not affect the set thus created.

The RULE Is As Follows:

If a set is not used for overnight printing, and is not going to be used again for any other purpose, it can be released without detriment to any other set.

SOME EFFECTS NOTED FROM PERFORMANCE IMPROVEMENT

As you know, over the past two months or so, we have made some changes in the RECON program for the purpose of speeding up response. Additional changes are still being made, and will be for some time.

However, we are pleased to report that there has been some beneficial effect, and that RECON is indeed running somewhat faster, as the following figures will attest.

*Preceding Bulletin was No. 73-4

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific and Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (301) 779-2121, ext. 606 or 607). Other problems or questions may be directed to William G. Brown (Telephone (202) 755-3465).

<u>Time Period</u>	<u>Average Response Time (Sec)</u>	<u>Average No of Commands/Day</u>
15 Oct. - 9 Nov. 73	28.7	2684
28 Jan. - 15 Feb. 74	16.0	3436

Thus, average response time is only about 55-percent as long as before, while, at the same time the number of commands processed has risen by more than one-fourth. Half of the commands are processed in under twelve seconds.

NEW ELEMENTS IN RECON DISPLAY

Two new elements have been added to the RECON FORMAT 2 (i.e. normal) display. These are the DCAF Number and the title extension. Their significance and use are discussed below.

1. Title Extension

The title extension is a new element designed to provide the necessary additional information concerning the content of an item without the inherent redundancy of the completely self-contained Notation of Content. Thus it may be normal running text or merely words or phrases added to the end of the title, but set off from it by a series of three (3) dashes.

2. DCAF Number

The DCAF number field (if any) now appears in the RECON display between the Access Level and the Unclassified Title fields. It is prefixed with the acronym "DCAF" followed by a space.

The DCAF number is primarily of interest to Headquarters personnel who are monitoring information exchange agreements, since it indicates the source from which a document has been received (as opposed to the originating source).

The DCAF number may be SELECTed or EXPANDED, using the file mnemonic "DC/" followed directly by the number.

EXPAND Example:

aDC/F123456

SELECT Example:

bDC/F123456

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HOW THE RECON QUEUE WORKS

A number of RECON users have been perplexed by the seemingly "unfair" method of placing commands in a queue awaiting processing. A few people have even drawn the inference that others were getting a higher priority. This is not true. All users including those at the STI Facility have equal priority at all times.

In some instances a user will find, on repeated use of the STATUS command, that his command has actually gone backward in the queue. Contrary to appearance, this going backward is not due to someone else's having higher priority, but is rather the result of the way in which the queue is constructed and taken from.

The RECON queue is a sequence of command slots, each slot being reserved for one specific user terminal. These slots remain where they are in the sequence whether any, all, or none of them actually contains a user command waiting to be processed. The RECON program withdraws commands from this queue in strict order. Thus, after it has completed processing a command in one slot, it then looks at the very next slot in the sequence to see if it contains a command to be processed. If it does not, RECON then looks at the next in sequence, and, when the entire queue has been exhausted, it simply begins looking at the top of the queue again.

During the time when RECON is processing one of the commands, an independent polling operation is going on. This operation polls all terminals to see if they have any commands to transmit to RECON. If a terminal does transmit a command, the polling task places the command in that slot in the RECON queue which is reserved for that particular terminal. The slot can, of course, be between the one from which RECON has taken a command to process and another one already containing a command awaiting processing. If this occurs, then the command previously awaiting processing will, in effect, drop one position farther back in the "apparent" RECON processing queue that is seen when the STATUS command is employed. This command "counts" for its user only those slots that actually contain commands while only looking at slots that lie between its users slot and the slot whose command is actually being processed by RECON (one of the commands being processed under the new multitasking-version). Thus the "fall back" effect noted is dependent upon the way RECON acts on the queue and gives all users an equal chance at falling back or moving ahead.

As examples of what can happen, we show below an abbreviated RECON queue at six different times (T1 through T6).

Terminal Number	T1	T2	T3	T4	T5	T6
1	PROC	PROC	PROC	X	WAIT	WAIT
2	X	X	X	X	X	X
3	X	X	X	X	X	X
4	X	X	WAIT	PROC	PROC	PROC
5	WAIT	WAIT	WAIT	WAIT	WAIT	WAIT
6	X	X	X	X	X	X
7	X	X	X	X	X	X
8	WAIT	WAIT	WAIT	WAIT	WAIT	WAIT
9	X	WAIT	WAIT	WAIT	WAIT	WAIT
10	X	X	X	X	X	WAIT

In this example, "PROC" means that the command from that terminal, is actually being processed, "WAIT" means that the command from that terminal is waiting in the queue, and "X" means that the terminal has not entered a command.

Assume that you are operating terminal number 8 in all of the following discussions.

At time T1, if you executed the STATUS command, you would find that your command was in queue position 2. (The command actually being processed is not counted.) That is, you would be waiting only behind terminal 5.

At time T2, even though terminal 9 has added a command to the queue, you would still be shown as in queue position 2.

But at T3, you would find that you had dropped to queue position 3, because terminal 4 had entered a command.

At T4, you would once again be back to queue position 2, because RECON has completed processing the terminal 1 command and has skipped down to process the terminal 4 command.

At T5, although you are still in queue position 2, terminal 1 has entered a command and is itself now in queue position 4.

At T6, terminal 1 has been moved back to queue position 5, due to the entry of a command by terminal 10.

Meanwhile the entry of a command by terminal 3 has no effect on your position which remains at 2.

With the improvement in response time due to greater use of multi-tasking, and also from polling and the improvements planned later this year, the foregoing phenomenon should become less and less noticeable.

* * * RECON BULLETIN * * *

NEW LIBRARY NETWORK FILES AVAILABLE

The NASA Library Network - Book Subsystem is being implemented in a phased manner as development continues. This approach allows for user interface through RECON terminals and permits responsive solutions to accommodate the requirements of the entire network. Many search functions are now working, and a small, but rapidly growing file of citations is now available to RECON. The current state of implementation along with RECON search methods are described in this Bulletin.

Please attempt to access the Library Network file as much as time permits. (No doubt, since it is new, it will not be available at all times.) For, if all users are able to become familiar with this new tool, we will have a very good basis for discussions and recommendations at the forthcoming STIO Conference at the end of April.

I. CURRENT BOOK DATA BASE

We are currently subscribing to the Library of Congress MARC II Distribution Service (All Languages, Books). A composite MARC II data base on magnetic tape from 1968 to the present time has been built. This composite data base will be maintained with updates and additions, and will be in the MARC format. At the time the composite data base was formed, there were 404,025 titles in the data base. Magnetic tapes of new books from the weekly MARC Distribution Service -- Books (All) contain approximately 2,000 records, some of which are new titles and some of which are updates of older titles.

A subset of the MARC II data base has been selected by use of appropriate LC Call Numbers such that 103,915 titles of probable interest to NASA will initially comprise this subset. The distribution of these book records is as follows:

<u>LC Call Prefix</u>	<u>Number</u>	<u>Classification Schedule</u>
Q	35,135	Science
R	14,878	Medicine
T	30,385	Technology
U	2,634	Military Science
V	1,682	Naval Science
HB	2,514	Economic Theory
HE	3,684	Transportation

*Preceding Bulletin was No. 74-1

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<u>LC Call Prefix</u>	<u>Number</u>	<u>Classification Schedule</u>
HF	5,961	Commerce
HJ	1,630	Public Finance
JX	3,638	International Law
Z662-Z999	1,774	Library Science
TOTAL	103,915	

These MARC records have been converted into the STIMS format and are being loaded into online storage of the IBM 360 Model 50. As the periodic MARC tapes are distributed, appropriate new works will be added to the data base, and corrections will be made in place. It will be possible to change the classifications selected (as storage space allows), to accommodate additional needs of center libraries.

The 103,915 MARC records are being loaded during the month of April. However, at any given time during the month, only some portion of these will be available. Accession numbers are distributed one-third each in the years 1972, 1973, and 1974, all in the V-10,000 series. Thus, accession numbers will be in the approximate ranges:

V 72-10,000	--	V 72-40,000
V 73-10,000	--	V 73-40,000
V 74-10,000	--	V 74-40,000.

In addition, 2,447 old Langley records are used to begin the V 73-10,000 series. These records require a special note, since they have gone through several format conversions, and are thus heavily studded with formatting errors.

Please do not concentrate your attention on these old records. They are not typical of the system, and are only included so that they not be lost completely. No constructive purpose can be served by diverting attention from the basic functions and formats of the system to the minutiae of these error-ridden records.

Duplicate checking of works held by NASA libraries and in the STIMS collection of MARC records and those records originally cataloged and keyed are accomplished at the STI Facility. Holdings information and local call numbers may be added to the appropriate records.

II. RECON SEARCHING

The RECON online information retrieval system may be used to search and display citations in the Library Network data base. RECON is employed in the standard manner as described in existing instructions except that for the NASA Library Network Book File the variations are as follows:

1. Begin Search

File collection 6 is used and it is indicated by responding to the BEGIN SEARCH with either a Search Title or TAB followed by a numeric "6" or an Alpha "F" and then TRANSMIT.

2. Inverted File Code

Determination of the entry point is accomplished by utilizing an optional two or three character alphabetic file code followed by a slash (/) immediately following a SELECT or EXPAND Command. The Inverted File Codes are as follows:

<u>Code</u>	<u>Type</u>	<u>Field</u>
TTL/	text*	Title
SER/	text	Series Title
CRP/	text	Corporate Name
CMN/	text	Conference Name
CMP/	text	Conference Place
PUB/	text	Publisher
SUB/	text	Subject Heading (L.C.)
SAE/	text	Added Entry
MSH/	text	National Library of Medicine Subject Heading MeSH)
LT/	text	All of the above text (TTL, SER, CRP, CMN, CMP, PUB, SUB, SAE and MSH combined). Single Words only. (i.e. No Proximity or Phrase Searching for LT/.)
LA/	-	Personal Author Name
ISB/	Classification	International Standard Book Number
CLN/	Classification	Library of Congress Call Number
CCN/	Classification	Library of Congress Card Number
DDN/	Classification	Dewey Decimal Number
CJN/	Classification	Johnson
CKN/	Classification	Kennedy
CLA/	Classification	Langley
CLE/	Classification	Lewis
CMA/	Classification	Marshall
CWA/	Classification	Wallops
CIT/	Classification	STIF
LC/	Classification	All of the above classifications (ISB, CLN, CCN, DDN, MSC, CAR, CAL, CFR, GGD, CHQ, CJP, CJN, CKN, CLA, CLE, CMA, CWA, and CIT combined)
LH/	-	Library Holdings/Orders

* Text searching is explained in the next section.

<u>Code</u>	<u>Type</u>	<u>Field</u>
CN/	-	Contract Number (which is interfiled with the contract numbers from all other Facility files)
RN/	-	Report Number (which is interfiled with the report numbers from all the other Facility Files)
ST/	-	NASA Subject Term (Thesaurus Controlled, which is interfiled with the subject terms from all the other Facility files)
None		The "default" is automatically made LT (All the text)

3. Text Search (SELECT) Statements

The Library Network Book subsystem permits the RECON user to perform text-search operations. That is, the user may search for individual words or phrases embedded anywhere within running-text fields. This capability is applied here to those fields that contain information that is too long to be contained within the normal inverted-file fields.

The text search statements can be entered either as a single word, as a proximity expression, or in the clear as a full phrase or sentence as described below. It should be noted that, when performing an EXPAND on any of the text inverted files, only words will be presented, not terms or phrases.

(a) Single Word

To SELECT citations containing a particular single word in any given text field, the following format must be used:

bfff/WORDA

where:

b is the SELECT command
 fff (or ff) is the inverted file code
 / is a slash, and
 WORDA is the word being SELECTED.

Note that the inverted file code "LT" can be searched using the Single Word method only (i.e. Proximity and Phrase searching are invalid for the "LT" code).

The following are some examples of the Single Word text search format:

- 1) bTTL/MASONRY
(SELECT all citations having the word "MASONRY"
in their title field).
- 2) bCRP/COMPANY
(SELECT all citations having the word "COMPANY"
in their Corporate Name field).
- 3) bLT/ELEMENTARY
(SELECT all citations having the word "ELEMENTARY"
in any text field.)

(b) Proximity Expression

The format for keying proximity expressions is:

WORDA \backslash *+N \backslash WORDB

where:

WORDA is a string of characters representing a word
in the text inverted file
 \backslash is a space (blank) character
* asterisk
+ is either a plus (+) or minus (-) sign used to
indicate proximity of WORDB before or after WORDA
N is a numeric digit from one (1) through eight (8)
if fixed proximity is desired, and if it is a nine (9)
then WORDB can be in any relationship to WORDA, but
must be in the same sentence.

WORDB is a string of characters representing a word in
the text inverted file which has the proximity
relationship to WORDA as indicated by the contents
of the expression

Note: Any number of words can be entered at this time;
however, for this phase of implementation, only
90 characters (including spaces) may be entered.

Examples:

- 1) bTTL/WAY \backslash *+3 \backslash MOON - TITLE SEARCH FOR "MOON" WITHIN 3 WORDS AFTER "WAY"
- 2) bSER/ACADEMIC \backslash *+1 \backslash PRESS - SERIES TITLE SEARCH FOR "PRESS" FOLLOWING
"ACADEMIC"
- 3) bSUB/PILOTS \backslash *-3 \backslash BRITISH - L.C. Subject Heading SEARCH FOR "BRITISH"
WITHIN 3 WORDS BEFORE "PILOTS".

- 4) bCMN/CONFERENCE/*9/PENOLOGY - Conference Name Search for "Conference" and "Penology" occurring in the same sentence.

Please note that the proper placement of spaces is important. There should always be a space between WORDA and the following asterisk. There should always be a space between the numeric digit.(1--9) and the following WORDB. There should never be any spaces between the asterisk and the numeric digit, whether or not the + or - sign appears.

Note again that the "all text" file code (LT) may not be used for proximity searching.

(c) In-the-Clear Phrase or Sentence

The format for searching for phrases or sentences in the clear is simply:

'WORDA WORDB WORDB'

with the text enclosed in quote marks and with spaces as word separators. STOPWORDS are deleted from the search argument prior to executing a search. The STOPWORD list is a comprehensive collection of common words of minimum value with respect to significant context within themselves. It consists of articles, pronouns, verbalized numerics and other words which would expand the size of the Text Inverted File with an excessive volume of postings. The content of this STOPWORD list will be subject to review and modification on a periodic basis.

Examples:

b/PTTL/'COBALT TREATMENT'
b/PUB/'KENDALL/HUNT PUB. CO.'
b/PUB/'AMERICAN TECHNICAL SOCIETY'

Note that the "all text" file code (LT) may not be used for phrase searching.

4. Citation Display Format

A RECON display of the citational fields from a single work can be requested, either from a search-generated item within a set or directly from an accession number entered directly. The work can be displayed in either a standard or a user-defined format which can contain either all, or a subset of, the data elements in any order. Through the operation of the SPECIFY FORMAT command, any number of data elements can be selected and their order rearranged.

Please note that for the Library Network Book file, the SPECIFY FORMAT command is such as to allow the fields to be specified by using field mnemonics instead of numbers.

Thus, if you wish to display Accession Number on one line followed by author and L.C. Call number on another line followed by Title on another line, you would enter the following SPECIFY FORMAT command:

kACC;AU,CLN;UTL

This new feature should make it considerably less difficult to use the SPECIFY FORMAT command with the Library Network. The elements in the standard format are displayed in the following order:

	<u>Mnemonic</u>
1. Accession Number	ACC
2. PUB/COPY Year Preceded by "19"	YER
3. Issue Number Preceded by "ISS:"	ISS
4. LC Call Number	CLN
5. ISBN	ISB
6. Dewey Decimal Number	DDN
7. LC Card Number	CCN
8. Misc. Classification Number	MSC
-- New Line if AU Field Present	
9. Personal Author Prefix	PAP
10. Personal Author	AU
11. Personal Author Dates	PAD
12. Personal Author Type	PAT
13. Personal Author Notes	PAN
-- New Line if UTL, ATL or RTL Present	
14. Title Prefix	TPX
15. Title	UTL
16. Alternate Title	ATL
17. Romanized Title	RTL
18. Title Supplement	TLS
19. Title Page Transcription	TPT
-- New Line if CRP or CMN Present	
20. Corporate NAME Prefix	CNP
21. Corporate NAME	CRP
22. Corporate NAME Supplement	CNS
23. Conference or Meeting Prefix	CMX
24. Conference or Meeting Name	CMN
25. Conference or Meeting Place	CMP
26. Conference or Meeting Date	CMD
27. Conference or Meeting Supplement	CMS
-- New Line if EDS, PUB or COL Present	
28. Edition Statement	EDS
29. Publisher Prefix	PPX
30. Publisher	PUB
31. Place of Publication	POP

Mnemonic

32.	Publication Statement	PBS
33.	Collation	COL
--	New Line if SER, PBC, ABS or any note present	
34.	Series Title	SER
35.	Price	SAP
36.	Language Note	LNG
37.	General Note	GEN
38.	Contents Note	CNT
39.	Copy, Issue, Offprint Note	CIO
40.	Abstract or Annotation	ABS
41.	Cataloging or Source Note	CSN
42.	Miscellaneous Note	MSN
43.	Vendor Note	VEN
--	New Line if SUB present	
44.	Subject Heading (preceded by "LC:")	SUB
--	New Line if SAE present	
45.	Added Entry (Preceded by "ADDED:")	SAE
--	New Line if NST present	
46.	NASA Subject Terms (Preceded by "NASA:")	MJS
--	New Line if MSH present	
47.	Medical Subject Heading (Preceded by "MESH:")	MSH
--	New Line if any Local Call Number Present	
48.	AMES-ISL Local Call Number (Preceded by "AM-ISL:")	CAL
49.	AMES-ATL Local Call Number (Preceded by "AM-ATL:")	CAR
50.	FLIGHT Local Call Number (Preceded by "FR:")	CFR
51.	Goddard Local Call Number (Preceded by "GD:")	CGD
52.	JPL Local Call Number (Preceded by "JPL:")	CJP
53.	Johnson Local Call Number (Preceded by "JSC:")	CJN
54.	Kennedy Local Call Number (Preceded by "KN:")	CKN
55.	Langley Local Call Number (Preceded by "LA:")	CLA
56.	Lewis Local Call Number (Preceded by "LE:")	CLE
57.	Marshall Local Call Number (Preceded by "MA:")	CMA
58.	NASA Hq. Local Call Number (Preceded by "HQ:")	CHQ

C.2

Mnemonic

59. Wallops Local Call Number
(Preceded by "WA:") CWA
60. Facility Local Call Number
(Preceded by "STIF:") CIT
- New Line
61. "MAIN-" followed by

one and
only one
bit out of
seven will
be on

{	"AUTH" if Author bit is on	MAU
	"TITL" if Title bit is on	MTL
	"CORP" if Corporate Name bit is on	MCR
	"MEET" if Meeting/Conference bit is on	MCN
	"PUBL" if Publisher bit is on	MPU

62. "TRACE-" followed by:

none, one,
or combina-
tions of
bits may be
on - if
none, then
do not dis-
play
"TRACE-"

{	"AUTH*" Author bit is on	AEA
	"TITL*" if Title bit is on	AET
	"CORP*" if Corporate Name bit is on	AEC
	"MEET*" if Meeting/Conference bit is on	AEM
	"PUBL*" if Publisher bit is on	AEP
	"SERS*" if Series bit is on	AEX

63. "CATLG BY-" followed by

one and only
one bit out
of these 18
will be
on

{	"AMES-LSL" if Ames-LSL bit is on	CSA
	"AMES-ATL" if Ames-ATL bit is on	CSB
	"FLIGHT" if Flight Research bit is on	CSC
	"GODDARD" if Goddard bit is on	CSD
	"JPL" if JPL bit is on	CSE
	"JOHNSON" if Johnson bit is on	CSF
	"KENNEDY" if Kennedy bit is on	CSG
	"LANGLEY" if Langley bit is on	CSH
	"LEWIS" if Lewis bit is on	CSI
	"MARSHALL" if Marshall bit is on	CSJ
	"NASA Hq." if NASA Hq. bit is on	CSK
	"WALLOPS" if Wallops bit is on	CSL
	"FACILITY" if Facility bit is on	CSM
	"LC" if Library of Congress bit is on	CSN
	"NAL" if National Agricultural Library bit is on	CSO



"NLM" if National Library of Medicine bit is on	CSP
"AIAA" if AIAA bit is on	CSQ
"OTHER" if Other bit is on	CSR

-- New Line .

64. Receipt Date (With year, month, and day
separated by slashes) RDT

65. Document Language LGN

Note: If Document Language is English with value of EN, then do not display; otherwise, traslate code to language in clear following "IN" (see list of standard languages).

66. Country of Publication: CPU

Note: If Country of Publication is the United States with value of US, then do not display; otherwise translate code to country in clear following "PUBL IN-" (see list of standard country codes).

67. "COPYRIGHT" if copyright bit is on; CRT
otherwise, skip

68. "REFERENCE" if Reference Document bit is REF
on; otherwise skip

69. Holdings/Orders Preceded by "AVAIL:" HLD

70. Order Date ORD

71. Number of Order ORN

72. Order Quantity ORQ

TYPE 1/2/13

72V12657 1966 ISS:00 HF5548.2.U52 1966 66-62736

GUIDE FOR AUDITING AUTOMATIC ♦♦ DATA PROCESSING ♦♦ SYSTEMS.

UNITED STATES. AIR FORCE. AUDITOR GENERAL.

FOR SALE BY THE SUPT. OF DOCS., U.S. GOVT. PRINT. OFF., WASHINGTON;

1 V. (VARIOUS PAGINGS) ILLUS. 26 CM.

1.00 COVER TITLE. INCLUDES BIBLIOGRAPHY.

LC:ELECTRONIC DATA PROCESSING -- AUDITING.

MAIN-CORP TRACE-TITL♦ CATLG BY-LC

TYPE 1/2/12

72V12961 1967 ISS:00 HF5548.2.L6 651.8 67-14734

R/LOTT, RICHARD M.

BASIC ♦♦ DATA PROCESSING; ♦♦ BY RICHARD M. LOTT.

PRENTICE-HALL ENGLEWOOD CLIFFS, N.J., X, 228 P. ILLUS. 24 CM.

INCLUDES BIBLIOGRAPHIES.

LC:ELECTRONIC DATA PROCESSING -- BUSINESS.

MAIN-AUTH TRACE-TITL♦ CATLG BY-LC

SAMPLE DISPLAY

ORIGINAL PAGE IS
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TYPE 1/2/11
72V14051 1967 ISS:00 TL521.3.C6A3 NO. 880 651.8 67-62883
A/TAYLO, JAMES T.
DIGITAL FILTERS FOR NON-REAL-TIME ♦♦ DATA PROCESSING; ♦♦ BY
JAMES T. TAYLO.
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION; FOR SALE BY THE
CLEARINGHOUSE FOR FEDERAL SCIENTIFIC AND TECHNICAL INFORMATION,
SPRINGFIELD, VA. WASHINGTON IX; 197 P. ILLUS. 27 CM.
NASA CONTRACTOR REPORT, NASA CR-880 "PREPARED UNDER CONTRACT NO.
NAS 8-11492 BY NORTHEAST LOUISIANA STATE COLLEGE, MONROE, LA., FOR
GEORGE C. MARSHALL SPACE FLIGHT CENTER." BIBLIOGRAPHY: P. 173.
LC: DIGITAL FILTERS (MATHEMATICS) DISTRIBUTIONS; THEORY OF (FUNCTIONAL
ANALYSIS) FOURIER ANALYSIS.
ADDED: LOUISIANA. NORTHEAST LOUISIANA STATE COLLEGE, MONROE, UNITED
STATES. GEORGE C. MARSHALL SPACE FLIGHT CENTER, HUNTSVILLE, ALA. UNITED
STATES. NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. NASA CONTRACTOR
REPORT, NASA CR-880
MAIN-AUTH TRACE-SERS♦CORP♦TITL♦ CATLG BY-LC

TYPE 1/2/3
72V10139 1957 ISS:00 TH5311.D33 693 56-11193
A/DALZELL, JAMES RALPH; A/1900-
MASONRY SIMPLIFIED; BY J. RALPH DALZELL AND GILBERT TOWNSEND.
AMERICAN TECHNICAL SOCIETY, CHICAGO; 2 V. ILLUS. 22 CM.
BUILDING TRADE SERIES V. 1. TOOLS; MATERIALS; PRACTICE. CONSTRUCTION
3D : I.E. 2D (REV.) 7TH PRINT. ; ED.: E. MATZKE. V. 2. PRACTICAL
INSTRUCTION. CONTRIBUTOR TO 2D ED.: H. L. MCCANDLESS.
LC: MASONRY.
ADDED: TOWNSEND, GILBERT; 1880- JOINT AUTHOR.
LA: / TH5311.D33 1956 V.1 / TH5311.D33 1957 V.2
MAIN-AUTH TRACE-AUTH♦ CATLG BY-LC
/ / AVAIL: / LANGLEY

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SAMPLE DISPLAY



1974

* * * RECON BULLETIN * * *

DATA BASE SPLIT

Our on-line storage devices are, for all practical purposes, full. This fact has made it necessary to change somewhat our method of operation, and will result in some inconvenience to RECON users during the next several months. We have postponed the change as long as possible through frequent file reorganizations, but we can no longer add records to our on-line RECON data base.

The following steps have been or will be taken:

1. On August 28, the pre-1968 IAA citation (linear) file was taken off line. However, the accession numbers (postings) for the items taken off line were not removed from the index (inverted) files. As a result, it is possible to DISPLAY or PRINT a set containing accession numbers for such items. If such accession numbers are obtained, the user will be advised by the system that the citations (Pre-68 IAA) are in an off-line file.
2. On or about September 30, both the index and citation files for IAA and selected other files will be split, and the rest of the planned data-base splitting project will thereby be completed. This will result in the creation of two completely separate data bases, a "prime" data base and an "alternate" data base. No items will appear in both. Attached is a list showing the contents of each data base as initially set up.

Initially, the prime data base will be on-line Monday through Friday except for Wednesday afternoon. The alternate data base will be put on-line one-half day per week only, on Wednesday afternoons starting at 12:30 EDT. Depending on your demonstrated needs, this frequency may be made more or less. Please let us know. It is not possible to have both prime and alternate data bases on-line simultaneously.

This split means, of course, that any search that is to cover both post-1968 and pre-1968 information must be run two times. It should be noted, though, that this is not a substantial duplication of effort, since different subject-indexing methods as well as different vocabularies were used during these two periods.

The prime data base can be uniformly searched using the NASA Thesaurus with its new terms and hierarchies which are being updated weekly on RECON, while the alternate data base can be uniformly searched using the now static Subject Authority List (SAL) which preceded the Thesaurus.

*Preceding Bulletin was No. 74-2

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific and Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (301) 779-2121, ext. 606 or 607). Other problems or questions may be directed to William G. Brown (Telephone (202) 755-3465).

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In developing search strategies after the data base split, searchers can more accurately and easily take into account the major difference in the indexing rules that were followed in applying the two vocabularies, namely, that the SAL terms were posted at all levels of specificity appropriate to a given document, while the Thesaurus terms are posted only to the most specific term appropriate in each hierarchy.

3. In a few months, if a new disk procurement action goes well, we will have additional on-line storage capacity. This will be sufficient to allow both data bases to be on-line at all times once more.
4. We have undertaken a new project to attempt to devise affordable methods by which individual items or classes of items may be taken off-line based upon some qualitative criteria or probable value of each document, instead of based simply on age in the file. This project is going forward now, but no benefits will be derived for some time.

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List of Prime Data Bases on RECON

September 6, 1974

<u>File</u>	<u>Accession Series</u>	<u>Time Period</u>
STAR	N-10,000	1968 onward
IAA	A-10,000	" "
CSTAR	X-10,000	" "
OSTARE	N-70,000	" " (includes 1968 documents transferred from OSTAR)
OCSTARE	X-70,000	" " (includes 1968 documents transferred from OCSTAR)
Tech Briefs	B-10,000	ALL
CDF	K-10,000	ALL
RTOP	W-70,000	ALL
AOSR	M-50,000	ALL
CPA	M-10,000	ALL
NLN	V-10,000	ALL

List of Alternate Data Bases on RECON

<u>File</u>	<u>Accession Series</u>	<u>Time Period</u>
STARA	N-10,000	62 -- 67
IAAA	A-10,000	63 -- 67
CSTARA	X-10,000	62 -- 67
SSTAR	X-50,000	ALL
ASTAR	N-90,000	"
ACSTAR	X-90,000	"
OSTAR	N-80,000	"
OCSTAR	X-80,000	"
NTP	N-60,000	"
CNTP	X-60,000	"
LCAMB	A-80,000	"

No. 4
October 23, 1974

* * * RECON BULLETIN * * *

BUNKER - RAMO MAINTENANCE CHANGE

In case you have not been informed, Bunker-Ramo has reorganized its maintenance operations. Henceforth, you must call a (toll-free) regional office rather than a local one.

To find out what the new number is in your region, just dial the old number and you should get a recording giving you the new one.

RECON TELEPHONE LINE CHANGES

It has come to our attention that some people have requested their local communications units to have changes made in their RECON communication lines (such as room-to-room or building-to-building moves). Due to the way ATT administers its system, all such changes have to be initiated by the communications unit in NASA Headquarters.

As a result, you will be best served if you call our office to request changes. The person to call is Rex Talbert on (202) 755-3465. If he is not in, either Van Wente, Bill Brown, or Norman McCabe will be glad to handle your request.

* Preceding Bulletin was No. 74-³4₆

RECON operational problems may be directed to the RECON Coordinator at the NASA Scientific and Technical Information Facility in College Park, Maryland. (Telephone: FTS (301) 982-6344, off-FTS (303) 779-2121, ext. 606 or 607). Other problems or questions may be directed to William G. Brown (Telephone (202) 755-3465).

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